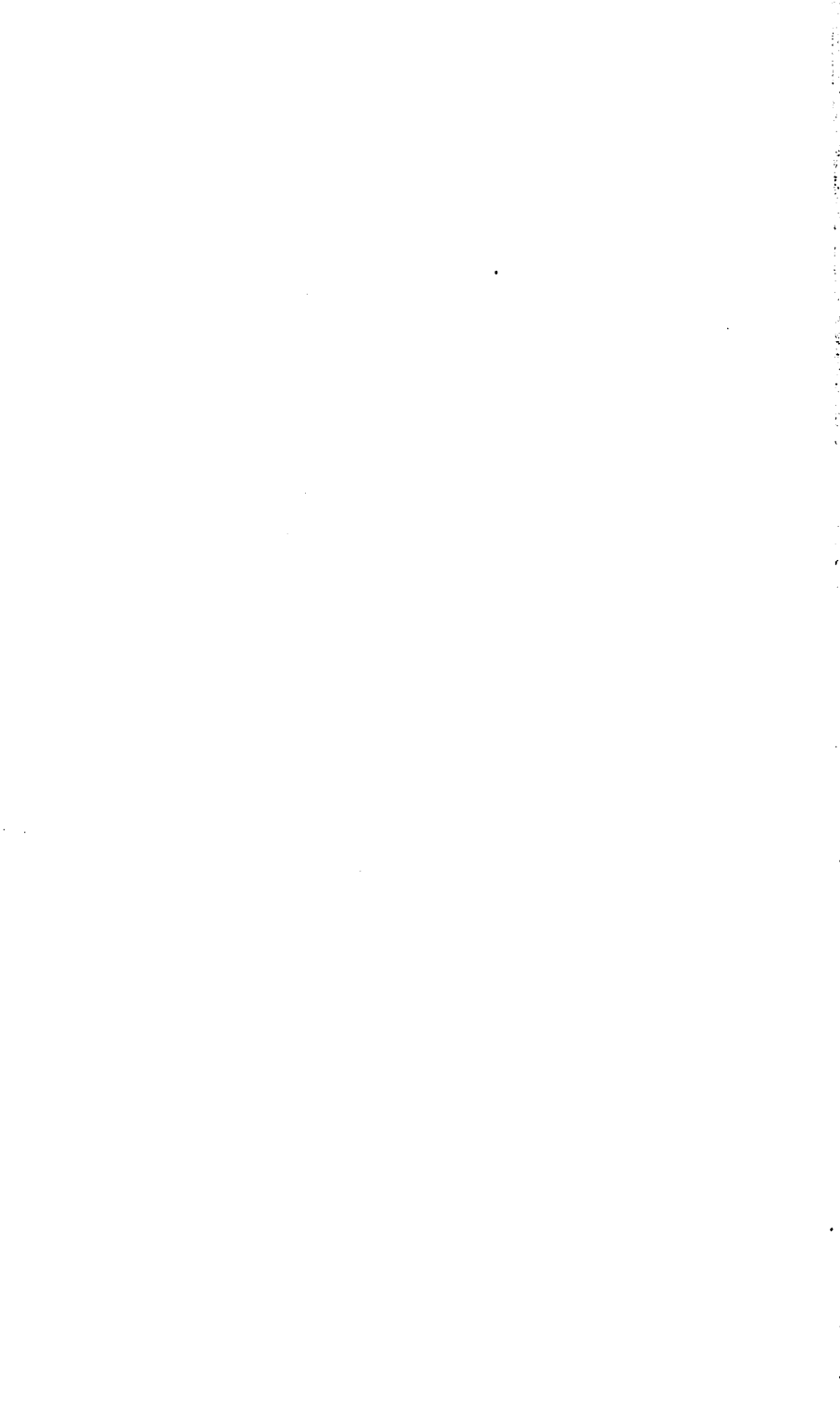


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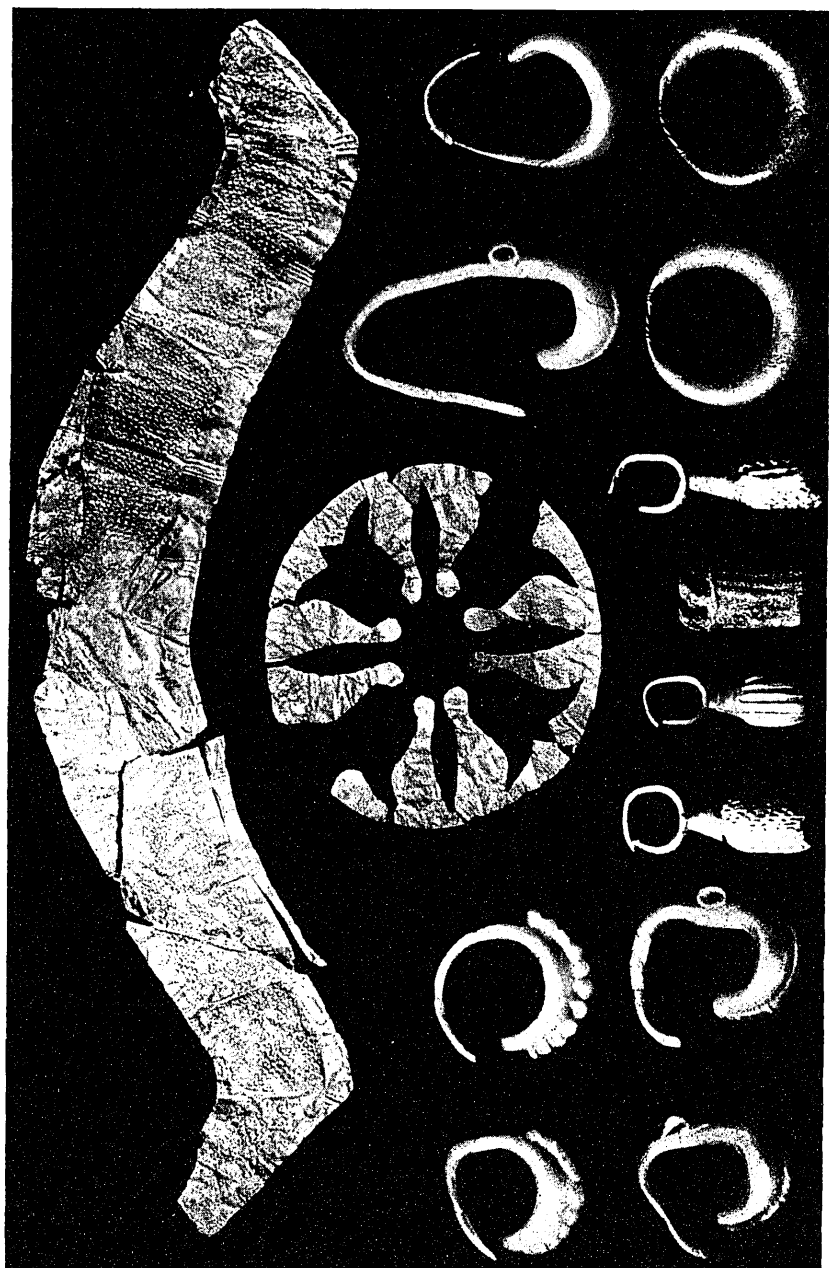
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GOLD ORNAMENTS FROM GERAR.

Frontispiece.

[see page 207.

# DIGGING UP BIBLICAL HISTORY

RECENT ARCHÆOLOGY IN PALESTINE AND  
ITS BEARING ON THE OLD TESTAMENT  
HISTORICAL NARRATIVES

*By*

J. GARROW DUNCAN, B.D.

DIRECTOR OF EXCAVATIONS IN BABYLONIA, EGYPT, AND PALESTINE (OPHEL, 1923-25)  
WILSON FELLOW OF ABERDEEN UNIVERSITY (TWICE)

VOL. II

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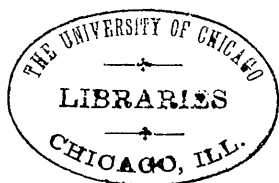
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TO  
MY DAUGHTER ISOBEL



*First published 1931*  
*Printed in Great Britain*

*Raw.*

## PREFACE TO VOL. II

ALTHOUGH the points of contact with the O.T. literature are indicated in Vols. I and II of this book, they have not been elaborated. In my Sixth Croall Lecture I gathered together all these points which bear on, confirm, and elucidate the Scriptures of the O.T. ; but this Lecture has been published in a separate volume entitled, *The Accuracy of the Old Testament* (S.P.C.K., 6s.), and will form a useful summary of the results of excavation as bearing on the O.T. in the hands of Biblical students or casual readers. To this book, therefore, I must refer readers for the elaboration of points of contact, which are only indicated in these two volumes.

In the excavation of the site of Jericho, which is being conducted at present under the direction of Professor Garstang, the excavator regards the solid brick wall of 18 feet in thickness as the oldest fortification of the town, as I have stated in Vol. I. This wall encloses a small fort of about 6 acres.

The stone wall with brick parapet he regards as the second fortification, and assigns to the early part of the Late Bronze Age (1600-1400 B.C.). This wall encloses an area of 12-13 acres, he thinks.

The double walls of brick, which rest partly on the ancient brick wall and enclose the same space of 6 acres, he regards as the latest fortification and assigns to the end of the Late Bronze Age (1400-1200 B.C.).

Supposing that these dates and deductions are correct, there is still no reason to conclude that the stone wall with brick parapet was not the wall of the period of Joshua—more especially if the date of Joshua's arrival in Palestine was nearer

1400 than 1200 B.C., as many are now inclined to believe, and as I think will ultimately be the accepted date.

The double brick walls may be even later than Professor Garstang thinks—as late as the time of Hiel, possibly.

The ancient brick wall and the double walls enclosed what was little more than a garrison outpost or a citadel with the city.

A large tower and the eastern gate have also recently been uncovered ; but, as the excavation is still in progress, nothing very definite can be said until all evidence available has been obtained.

J. G. D.

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## ABBREVIATIONS—BOOKS QUOTED

- Acc. of O.T. = The Accuracy of the Old Testament, by J. Garrow Duncan.  
 Ann. IV. = Annual IV. (Ophel) of P.E.F., by Macalister and Duncan.  
 B. and M. = Bliss and Macalister.  
 Byz. = Byzantine.  
 C. = Cave.  
 Can. = Canaan, by Père Vincent.  
 D.E.E.O.T. = The Exploration of Egypt and the O.T., by Garrow Duncan.  
 D.N.B. = La Deesse Nue Babylonienne, by Contenau.  
 D.S.L. = Schweich Lectures, by S. R. Driver.  
 Encyc. Bib. = Encyclopædia Biblica, T. K. Cheyne.  
 E.P. = Excavations in Palestine, by Bliss and Macalister.  
 G. = Gezer (town); or "Gezer," by R. A. S. Macalister.  
 G.C. = Gezer cave.  
 Gr. = Gerar (town); or Gerar, by Sir Flinders Petrie.  
 H.B.D. = Bible Dictionary, Hastings.  
 H.C.M. = Higher Criticism and the Monuments, by Professor Sayce.  
 Heb. = Hebrew.  
 H.H.S. = Hittite Seals, by D. S. Hogarth.  
 H.P. = High Place.  
 I. B. = First Bronze Age.  
 II. B. = Second Bronze Age.  
 III. B. = Third or Late Bronze Age.  
 Ins. = Inscription or Inscribed.  
 J. = Jericho, by Sellin and Watzinger.  
 J.P.O.S. = Journal of Palestine Oriental Society.  
 J.S.T. = Jerusalem sous Terre, by Père Vincent.  
 Knossos, by Evans.  
 Mgd. = Megiddo, by Schumacher; or town.  
 M.M.C. = Mound of Many Cities (Lachish), by F. J. Bliss.  
 N.B. = Naqada and Ballas, by Petrie and Quibell.  
 Neo. = Neolithic.  
 Pal. = Palæolithic.  
 P.E.F. = Palestine Exploration Fund.  
 Q.S. = Quarterly Statement of Palestine Exploration Fund.  
 S. and W. = Sellin and Watzinger.  
 S.I. = Samaria, Vol. I., by Reisner, Fisher and Lyon.  
 S.P.C.K. = Society for Promotion of Christian Knowledge.  
 S.S.A. = Proceedings of Scottish Society of Antiquarians.  
 T. = Tomb.  
 Ta. = Ta'anach (town); or Ta'annek, by Sellin.  
 T.A. Letters = Tell el Amarna Letters.  
 T.H. = Tell el Hesi, by Petrie (Lachish).  
 T.M. = Tell el Mutesellim (Megiddo), by Schumacher.  
 Tna. = Transjordania.  
 T.S. = Tell Sandahannah. See E.P.  
 V.C. = Canaan, by Vincent.



## DIVISIONS OF THE SUBJECT

THE Archæological History of Palestine, so far as it is known to us at present, may be divided into the following periods :

1. The Neolithic, or Cave-dweller, Period, dating from an unknown limit prior to 3000 B.C. down to and after 2000 B.C. Traces of the Cave-dweller Civilisation are found very much later than 2000 B.C. The Neolithic Period in flints, *e.g.*, continues down to 1200 B.C.
2. The Early Bronze Age—Amorite Immigration—dating from prior to 2500-2000 B.C.
3. The Second or Middle Bronze Age—Amorite and Hittite—2000-1600 B.C.
4. The Third or Late Bronze Age—Egyptian occupation—1600-1200 B.C.
5. The Period of Hebrew Conquest, and Period of the Judges about 1200-1050 B.C., Transition Period.
6. The Hebrew Pre-Exilic Period, 1050-597 B.C.
7. The Period of the Exile—Exilic—597-440 B.C.
8. The Hebrew Post-Exilic Period, 440-50 B.C.

Embracing :

(a) The Greek and Persian Periods, roughly 600-300 B.C. Greek influence, however, appears as early as the eighth century B.C.

(b) The Hellenistic Period, 300-50 B.C., including the Maccabean Period, 150-50 B.C.

9. The Roman Period, 50 B.C.-A.D. 350, including the Herodian Period 50 B.C.-A.D. 70.
10. The Byzantine Period, 350-700 A.D.
11. The Arab Period, roughly A.D. 700 to modern days. The period from 1250 B.C. downwards is also spoken of as the Iron Age, and is subdivided thus :  
Early Iron Age, 1250-1000.  
Middle Iron Age, 1000-600.  
Late Iron Age, 600 downwards.



V

HEBREW AND CANAANITE DOMESTIC  
ARCHITECTURE

*c.* 2500—100 B.C.





## HEBREW AND CANAANITE DOMESTIC ARCHITECTURE

### HOUSES : GEZER AND OTHER SITES

#### PLAN

THE general plan of the ordinary dwelling-house as known from Gezer and other sources is the same as that of the palace or large residence : a courtyard opening on the street, with a number of chambers opening off it. The only variation seems to consist in the size and number of courtyards and chambers, or the materials used. This holds good of houses from the earliest times down to the present day.

STORE ROOMS.—In every house from 2500 B.C. downwards at least one chamber was set aside as a store chamber for food, and in larger houses several store chambers are found. "Gezer," Pl. 49, Fig. 1, shows a courtyard with five chambers and a grain-store of five bins. On the same plate (Fig. 5) is a large house, remarkable for the number of circular corn-bins in it. It had been the house of a wealthy person. Both these houses belong to the earliest stratum of Gezer, and date about 2500-2000 B.C.

Store rooms in houses were of the following types :

1. One or more chambers set aside for the purpose.
2. Rooms fitted with or divided into bins.

Circular corn-bins built within the house.

4. Secret cupboards in the thickness of the wall.

2000-1600 B.C. : GEZER.—Another house of the next period (2000-1600) at Gezer has a courtyard with chambers on both sides, though those on the south may belong to the neighbouring dwelling.

In the court is a round corn-bin, and the room beside it is a store chamber. At the eastern end was a cistern cut in the rock. To this period belongs also the fine structure (Pl. 49, Fig. 2) of sun-dried bricks which measure 16 inches square by 5 inches thick. The walls are massive, and the rooms rectangular. At two points (A and B) in the thickness of the wall are secret store cupboards. A is oval, and measures nearly

5 feet by 4 feet and 27 inches deep. B is 27 inches square and 6 inches deep. In the corner of Room E is an oven; and of Room C, *a lamp and bowl deposit*, substitute for an infant sacrifice, to bring luck.

Outside, the brick walls were supported by a *stone revetment*.

Fig. 3 is another house of this period (1800-1600 B.C.) with some uncommon features. The court is paved with stones, and under it is an older similar pavement. At the opposite ends of the court are two pits (A and B), 35 inches and 42 inches in diameter. Outside of its west wall are two small columns, and there is a curious fork-shaped wall (D), the purpose of which is unknown (Pl. 49, Fig. 3).

FOUNDATIONS.—Usually foundations of houses do not go deep, but, where the walls are heavy, they are sometimes built on the rock. At Tell-el-Hesi and Gerar (Tell Gemme) *beds of sand* were laid under them, an Egyptian custom; and at Megiddo, curious wooden footings, consisting of wooden beams, regularly laid.<sup>1</sup> Neither of these was found at Gezer. At Jericho, as stated, the brick walls were built on rough stone foundations. This was the general rule.

Watch-towers in vineyards (*cf.* Isa. i. 8) seem occasionally to have been built in square cuttings in the rock surface outside the cities.

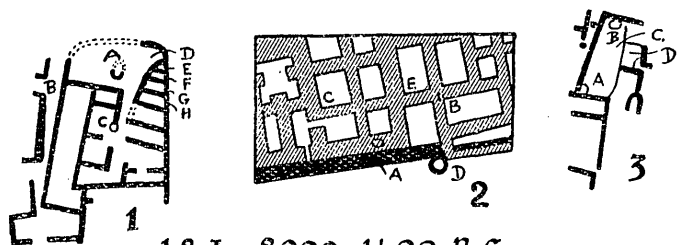
Frequently, in later occupations, old walls are used as the foundation of new walls. Old city walls are often made use of in this way, both as foundations and as walls of houses.

MASONRY.—At Gezer house walls were built of stones varying in size from mere pebbles to boulders which one man could scarcely lift. The commonest size is about 20 inches each way. The stones are invariably set in mud-mortar. Lime or plaster never are used, except in lining cisterns, until late times. The stones are never dressed, or at best only hammer-dressed. Dressed corner-stones are very rare, and doorposts or lintels are as rare, having probably disappeared into later buildings. The walls are simply a rough ashlar construction, with irregular joints and coursing, interstices being filled with mud and pebbles.

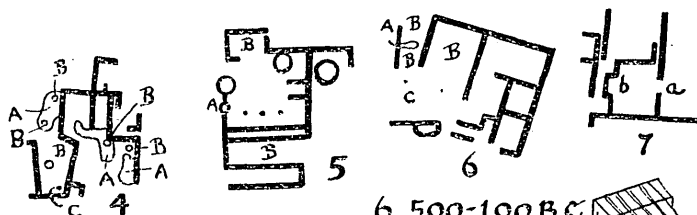
*Stone-dressing* does not appear at Gezer till the time of Solomon, who built the towers of the outer wall. It appears again later, in the structures of the Maccabean period (150-

<sup>1</sup> V.C., p. 38.

# HOUSE PLANS.

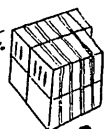


1, 2, 3, 2000-1400 B.C.



4, 5, 1000-600 B.C. Hellenistic.

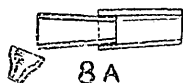
Hebrew Period.



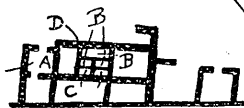
9A



8



8A



9

10 0 10 20 30 40 50 60 70 ft



9B

1 A Hearth. B. Street. c. Doorpost. D. Pile of Vetch.

E. Empty. F. Corn & Barley mixed. G. Corn.

H. Straw. 3. c. Pavement. D Older pavement.

4. A. Platform. B. Oven. c. Pillar Base.

5. A. Vat. B. Plaster pavement. 6. A. Waterchannel.

B. Stone pave<sup>t</sup> c. Pillar bases. 8. B. wheat vetch.

8A, Section of drain under floor at A fig 8.

9. B. Straw. c Corn. D. Skeleton. 9A. Pile of bricks at A in fig. 9. 9B. Mark on brick.

FIG. 1.—GEZER (PLATE 49).

50 B.C.). Elsewhere, as at Samaria and the structures of Rehoboam and his successors, stone-dressing is usual.

In one house wall at Gezer, however, of the period between 1000 and 600 B.C., there are drafted stones, which are probably of Rehoboam's time.

The stones were quarried from the rock surface, outside the town, though only when old materials could not be found. Drafted masonry has been found as early as Rehoboam's time, and was used by him.

*Plaster.*—In later cisterns the plaster was of burnt lime.

In the Maccabean baths the plaster was hardened by sea-shells, which had been brought up specially; but in earlier instances only ground lime or mud was used. I found sea-shells in the Maccabean stratum on Ophel, which had been brought there to be ground to powder for hardening pottery or plaster.

It is very likely that they baked this mud plaster hard by lighting fires in the cistern after putting it on, even at an early date, as they certainly did in the later periods.

*Mason's Marks* were not found prior to the Maccabean period, except at Samaria, *q.v.*

*Bricks.*—It should be noted that no complete house has been found at Gezer. These stone walls of houses are mere foundations, on which rested the real walls of the house; and these walls were most probably of brick. In the earliest stratum a stone wall was found only 32 inches above the rock surface. The debris below it was a shapeless mass of brick belonging to an earlier building. Bricks were, therefore, used at Gezer in the earliest occupation. The earliest houses, therefore, as at Jericho, were probably of brick, resting on a stone and mud foundation.

The bricks varied in size. Some measured 21 by 10½ by 4 inches, and others only 13 by 10 by 4 inches; others 16 inches square and 5 inches thick. One brick measured 29 by 6 inches and projected 17 inches from the wall, but it had apparently been made for a special purpose. They were mostly sun-dried, rarely baked.

In one wall at Gezer stone courses were found resting on brick courses, as in the stone and brick outer wall of Jericho, and at Megiddo.

*PAINTING WALLS.*—Plastering or colouring of the walls of rooms does not appear till the latest period at Gezer; but there

is reason to suppose that walls were coloured with ochre at a much earlier date, probably even before the Hebrew period.

Such examples of coloured plaster as I have seen are all of late Roman or Byzantine date, but it was common in Hellenistic times (see Hellenistic Houses). In these the ochre used was the reddish-brown material, which was used in Palestine for painting pottery from earliest times, and lumps of which I picked up in the debris of Ophel. This is undoubtedly the "shāshēr" or red ochre spoken of in Jeremiah xxii. 14 and Ezekiel xxiii. 14, as used on house walls.

FLOORS.—The floors of the earliest houses are simply earth, as in the poorer houses of Scotland of only fifty years back. Sometimes they were of packed earth, mixed with powdered limestone; or of small stones and lime chips; and sometimes there was a pavement of cobble-stones.

Mosaic floors do not appear till the Roman period.

DOORS.—Of doors we know little. Walls were usually ruined below the level of the threshold, which was raised several inches above the surface of the street. The jambs of doorways were simply vertical sides left in the masonry, but doubtless pegs had been driven in to attach the woodwork, though no evidence remains.

Doors were probably of wood. Perhaps reed-matting was used, or stone.

Hinges.—As to the nature of the hinges, there is no doubt, for great numbers of door sockets have been found, though not *in situ*. The doors swung on large pins projecting above and below and turning in stone cups—one in the stone which served as lintel, and one in the threshold.

Stone doors, with similar hinges turning in stone sockets, were later used by the Hebrews in their rock-cut tombs.

If *fastenings* were used, they were probably wooden bars fitting into slots in the jambs of the door. Holes for receiving such bars are found drilled in the ends of walls.

Iron locks and keys do not appear till the Hellenistic period (550-100 B.C.).

Only one lintel-block was found at Gezer. It measures 71 by 15 by 18 inches. It belongs to the period 550-100 B.C. Naturally, such large blocks would be re-used and probably broken up.

ROOFS.—Roofs were usually flat. Arched or dome roofs did not occur at Gezer till the Hellenistic period (550-100 B.C.);

but at Bethshan two rooms have been found with barrel-arched roofs, and a street which seems to have had a sort of arched roof. These barrel-arches were of bricks. This throws the date of the first use of the arch in Palestine back about 800 years to 1350 B.C. It was probably used even earlier.

The numbers of limestone rollers found show that roofs were covered with mud, flattened and smoothed to throw off rain, as at the present day : but these rollers are found *chiefly in the Hellenistic stratum*. They are found, however, in early strata, as at Megiddo Citadel, but may belong to a late occupation.

In earlier houses the roofs had been flattened and smoothed by rubbing-stones, such as were found in the ruins. The roof had consisted of logs or beams resting on opposite walls, covered with branches or wattle to keep the mud or clay from falling through. In one burnt chamber, at Gezer, such beams were found charred. They were 6 inches thick one way, and 4 inches the other, and had been placed 31 inches apart. How the intervening spaces were filled up is not known. The maximum roof-span was about 13 feet.

Where the room was too wide a span for single lengths, a row of columns supporting a beam-rest was erected, midway between the two walls, and two lengths used for roofing. These columns were probably similar wooden beams, but a flat stone was placed under them to prevent their sinking. Rows of such stone pillar-bases are frequently found in chambers, the commonest number being *three*. To push these pillars off their bases, and so make the roof collapse, would be no heavy task for a powerful man, and this is evidently what Samson was credited with having done in Judges xvi. 26-30, where the house described appears to have had such a row of pillars supporting the roof.

The first example of such a colonnade found at Gezer belongs to the early Hebrew period (1000-600 B.C.) ; but the pillars here supported a verandah, which ran round two sides of the house, four pillars on each side. Among large public buildings, however, instances occur where rooms had been divided by columns, as stated above.

STAIRS.—Stairways are rare, and nowhere justified the inference that there had been an upper storey, in early houses. In the house on the wall at Jericho a stair led to the top of the wall. It consisted of only two or three steps. It may have

led up to the entrance of an upper room, or to a raised platform within a room, but most likely to the roof and the top of the city wall.

HEARTHES.—Stone enclosures in corners or in the centre of rooms may have been fireplaces. Two such were found at Gezer in houses of the period prior to 2000 B.C.

WINDOWS.—If there were windows, they must have been simply open holes in the wall; but more probably in the earlier houses the rooms were lighted from the open court by the doors, a common practice still. As the walls are never found standing to a sufficient height, no evidence has been found.

In the Roman and Byzantine periods windows were common, and glass was used to fill them, as we found in several houses of Roman and Byzantine times on Ophel.

## EARLY HEBREW DWELLING-HOUSES

Hebrew houses were much the same as the Canaanite.

Ordinary dwelling-houses of the better class in the Hebrew period are built on the same plan as large public buildings or palaces, and consist of a central court with rooms opening off it. Houses of the poorer class consisted of only one room, but in front of it a walled-in yard, such as we see in modern peasant houses in Egypt. Examples were found at Bethshemesh, Ta'anach, and Jericho.

The *walls* were sometimes of bricks on rough foundations of stones and mud, the bricks being taken from an ancient city wall on the site. Sometimes they were built of mud and rubble throughout; sometimes of fire-baked bricks; and often of undressed stones with mud-mortar, as at Ta'anach.

The *floor* was usually of stamped earth, but occasionally a thick layer of limestone chips stamped hard gave it the appearance of lime plaster. In some houses the stamped earth floor was covered with a thin layer of mud plaster, nicely smoothed. as found both at Ta'anach and Jericho.

PLASTER.—Occasionally the walls were covered with *plaster* and even whitened, as at Ta'anach; but no example of painted walls has been found, though there is little doubt they used reddish-brown ochre for this purpose.

The *roofs* consisted of heavy wooden beams, covered with straw, or reeds and mud, and  $13\frac{1}{2}$  feet seems to have been the



average width of stretch for the beams at their disposal (see Ta'anach and Jericho).

**ROOMS.**—In one square house near the spring at Jericho there were five rooms. Of these, one was a small entrance hall, one an open court, and one a small storeroom. Another was a large living or sleeping room, and there was another room, probably also a bedroom. Of these, the open court served as the public or reception room. In size these ordinary rooms averaged about 13 feet square.

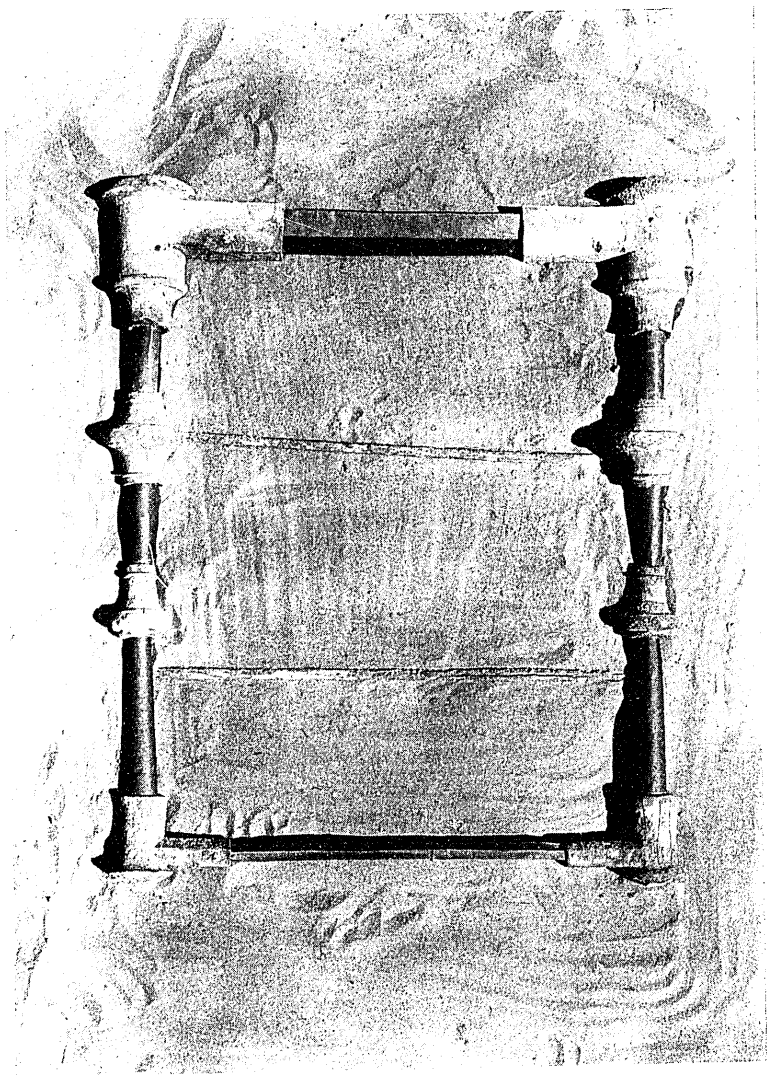
**FURNISHINGS.**—Traces of hearths have been found, but the walls are too much ruined to show whether there had been windows or not. The frequent reference to windows in the O.T.—*e.g.*, in Jeremiah xxii. 14—however, indicates that windows were in use. Large water jars, wine or oil jars, and cooking vessels are found both complete and in fragments.

The oil lamps used are quite familiar. Most of the cooking was probably done at an open fire or on charcoal braziers in the open court or guest-room.

The only form of chair found is the divan. In the Jericho house a divan 9 feet long and 3 feet wide, made of mud or clay, ran along one side of the guest-room. This is still the only sitting-accommodation provided, except mats on the floor, in ordinary guest-houses in Mesopotamia and elsewhere in the East.

**BEDS.**—Divans may have been used as beds, but no example of a bedstead of early times has been found either in Canaanite or in Hebrew houses. If they used them, they had been of wood and have perished. It is much more likely, however, that they simply spread their bedding on mats, and slept on the floor, as even some well-to-do Arabs do still in Transjordan and Palestine.

The only bedstead known so far in Palestine is the fine bronze bedstead found last winter at Bethpelet (Tell Fara) by Petrie's School. It had been imported from the West, probably Crete, and belongs to Western civilisation. It consisted of four corners, each cast in one piece, and fitted with tubular sockets. Into these were fitted wooden bars at the top and bottom, and at the sides. The "feet" were made very much broader than the upper ends of the legs, to prevent destroying the rugs of the floor itself, castors not being yet thought of! The material of the bottom has vanished—



BRONZE BEDSTEAD—BETHPELET 8TH CENTURY

facing p. 10.



GRANARY—GEZER 2500—2000 B.C.



WINDOW—LATE ROMAN HOUSE—OPHEH,  
SHOWING PLASTER KEYED.

facing p. 11.

probably it was of wood which rotted away—and there was nothing to show the method by which the complete couch was fitted together.

**COUCHES.**—In 1929 at Tell en Nasbeh (Mizpah) a terracotta model of a couch was found in the large cave on the eastern slope of the mound. This model belongs to the Middle Bronze Age (2000-1600), and shows that couches of some sort were used by the Canaanites at that time. (*Q.S.* Jan., 1930.)

### BETHSHEMESH : HOUSES WITHIN THE CITY AREA (HEBREW)

At Bethshemesh houses of the Israelite period were found built of *bricks* on *stone foundations*.

The highest point of one such house was only 5 to 10 inches below the present surface. The bricks measured 20 by 15 by 4 inches, thus agreeing with the bricks found at Lachish, Jericho, Gerar, and elsewhere, and showing affinity rather with Babylonia than with Egypt. These bricks were probably taken from an earlier Amorite wall, later replaced by the stone wall. They are all sun-dried. The stone foundations of this house were 6 feet below the surface. The floors were of clay, stamped hard. These *stamped clay floors* were found also in the period of Philistine occupation, 1300 B.C. downwards. In the later houses floors were covered with "limestone plaster," which may mean limestone chips stamped hard, or mud plaster.

It is possible, as I suggest elsewhere, that these stamped floors were really added later to bring the floor of the house up to the street level, which, by the accumulation of debris thrown out of doors, was continually rising. I have found instances where doorsteps were also raised in level.

A heap of burned beans of Egyptian origin, found in one room, shows that the catastrophe fell upon the town when the grain was being winnowed or just after harvest. This would fix the attack of Sennacherib to the late summer or about July.

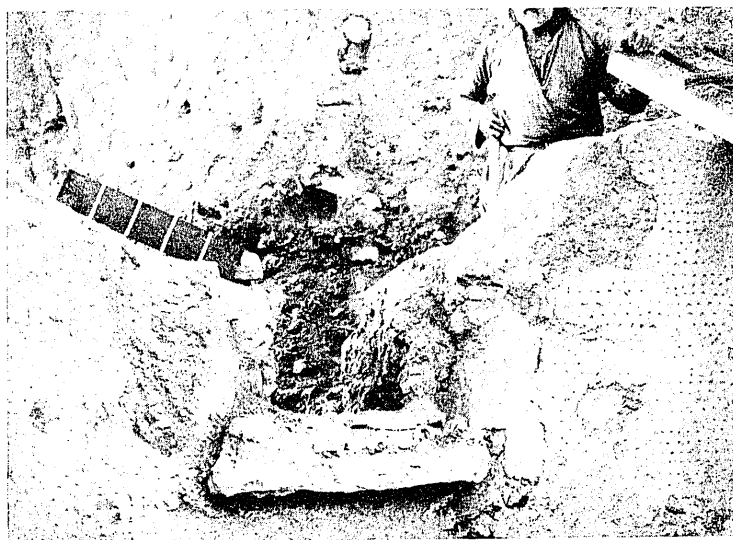
The pottery found is pre-Exilic Hebrew.

Underneath the floor of this house was found a deposit of fine Philistine painted ware.

The Philistines appear to have built their houses on the same method and of the same materials.



GRANARY - GEZER (2000-2500 B.C.)



WINDOW - LATE ROMAN HOUSE - OPHEL.

(DRAWING BY ASHTON GARDNER)

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## TA'ANACH HOUSES

Ordinary dwelling-houses at Ta'anach appear to have been one-roomed huts, built either of mud-brick or unhewn stone, throughout all the centuries down to Arab times. The town of Ta'anach must therefore have resembled a modern fellahin village, where only the house of the sheikh or of an effendi stood out prominent.

Three kinds of houses may be distinguished :

1. In the earliest stratum they were all of rubble laid in mud layers. These, however, are only the foundations which Sellin describes : and, as not a single brick was found, he concludes that the house-walls were made of such a mixture. The probability is, however, that the walls proper were of sun-dried brick, resting on these mud and rubble foundations.

2. An advance was made on this type in houses found under the north-east tower and elsewhere. These houses had all been built of fine, large, carefully shaped and for the most part fire-baked bricks. The floor was of hard stamped mud. The houses here measured only about 13 feet each way, though perhaps this may have been a minimum size ; but it supports my observation that 13 feet was the usual breadth of roof-span in these dwellings.

3. The third class are of unhewn and undressed stones, though carefully levelled or straightened.

These were found chiefly in the excavations at the north end, on the main street, under the Arab tower, and above all in the east and south pits.

The floor had been stamped hard, and covered with a smooth coat of plaster. The inner walls also bore a coat of plaster, white in parts. The roof consisted of beams of wood laid across the walls, covered by straw and mud.

Sellin found six actual buildings, which he places in chronological order according to the pottery found, and for other considerations.

1. The oldest is the west tower described above (vol. i.).
2. The building in the north with the underground chambers belongs to the same period.
3. The large building in the excavation of the main street.
4. The east tower with its outworks.
5. The north tower.
6. The Arab tower and town.

As, however, Sellin dates his pottery much too late, these buildings are mostly older than the period to which he has assigned them: the oldest date probably from about 2500-2000 B.C., though he assigns them to the fifteenth or fourteenth centuries B.C.

### JERICHO : HOUSES (ISRAELITE)

A FIVE-ROOM HOUSE AT JERICHO.—A good example of a small dwelling-house is described by S. and W. in *Jericho*, pp. 73-74. It was built on the mound by the spring, and Sellin regards it as Israelite.

The whole enclosure is almost square. It contains an entrance hall, an open court, a small store chamber, a large sleeping or living room, and another room. The door on the north-west side leads into a small hall 4 feet wide. This leads south-west into an enclosure almost square, the floor of which is of beaten earth. On the south-east side, just opposite the entrance, is a *divan*, made of clay, measuring  $9\frac{1}{2}$  feet long and 3 feet wide. This was, therefore, the reception room for guests, and as the floors of the other rooms were covered with plaster, and raised above its floor level, this may have been an open court.

At the north-east corner of this room or court is a very small square room, which contained in one corner a large pottery water jar or barrel, with two handles clumsily made. On the floor was a large quantity of cooking-pots, jars, plates, cups, pedestal bowls, fragments of large amphoræ, clay weights and pottery lamps, and a handle made of stag's horn. This small room showed no trace of a fireplace, and was probably a storeroom, the cooking being done in the court at an open fire or brazier.

North-east of the court there had been another room, which was entered from the court by a door close to the storeroom. In this room wine jars and other vessels were found.

The living room was on the south side and occupied the whole length of the structure. The loam floor is raised above the level of the threshold of the main entrance, and above the floor level of the court or reception room.

No description is given of the pottery, but the pedestal bowl points to the late Bronze and early Hebrew period, 1200-700 B.C.



## SAMARIA

The ordinary dwelling-houses of Samaria of the earlier periods of occupation were so confused and destroyed by the masonry of later houses, that no plan of them could be made.<sup>1</sup> Even houses of the Hellenistic period have been completely destroyed, and only houses of the pre-Herodian and Roman periods are recorded in the volume.

## OPHEL-ZION

Not a scrap of masonry was found on Ophel that could be set down as part of either a Canaanite or a Hebrew dwelling, though the abundance of pottery sherds sufficiently attested the presence of both. The whole site has been so cut up by successive occupants, most of whom placed the foundations of their houses on the rock.

The debris was never allowed to accumulate to any depth, so that at most points the rock surface was only a few feet down, and in some parts only 2 feet.

The houses found were late Roman, or Byzantine and Arab. The house under which we found drain tiles stamped with the maker's name Eusebios in Greek, and which Macalister set down as Roman, is now regarded as Byzantine. Of the same period is the Byzantine house which rested on the burnt mass described by Macalister as a Millo Tower of Solomon.

Ophel has thus contributed nothing to our knowledge of the houses or public buildings of the earlier periods except the rock-cut cisterns, which are numerous.

## HEBREW DWELLING-HOUSES : POST-EXILIC

## HELLENISTIC PERIOD : HOUSES, 550-100 B.C.

One of the finest examples of a house of this period, 550-100 B.C., was found in "Abd Allah's Cairn" on the top of the Mound of Gezer.

The entrance is on the east side, and leads into what had probably been an open court. A door on the south side of this court leads into a building which is otherwise unconnected with the house proper. This consists of a small central room with a room on each side of it. The one to the west

<sup>1</sup> See *Samaria*, p. 134 ff.

had been a store chamber, and in the north-east corner is a plastered cylindrical pit 43 inches wide and 83 inches deep for storing grain.

That on the east side consisted of a cistern with steps and a reserve reservoir alongside. The water had been led from the roof by a conduit, of which the lower end was found *in situ*, into a small square plastered filter vat. Here the sediment sank to the bottom, and the water ran into the cistern by a hole near the top, just as we find in modern field-cisterns today in Palestine. When the step-cistern was full, this hole could be stopped, and the water ran along a channel into the reserve reservoir.

The step-cistern is about 13 by 9 by  $7\frac{1}{2}$  feet deep, and is built of square blocks, covered with plaster. Six steps, arranged in two groups of one broad and two narrow, lead to within 3 feet of the bottom. They average 9 to 12 inches in depth.

The house proper consists of twelve rooms all connected with each other by doors. Some of the rooms are square, some oblong, and some trapezoidal. The entrance from the court is not a straight door, but by an opening between the ends of two overlapping walls, so that the interior could not be seen from the outer court. This opening led into an inner court or hall, from which two doors led to the twelve rooms.

The masonry is rough field stones laid in mud-mortar, covered internally with a smooth plaster which had been painted in green and red stripes. The doorways are, however, of stones more carefully shaped.

In one of the innermost rooms on the north-east corner of the structure were found two steps of a stair that had led to the roof or to the second storey. This would be the only indication of a two-storey house found at Gezer.

Thus the plan of the ordinary dwelling-house remains the same from the earliest Amorite times at 2000 B.C. down to late Greek times at 100 B.C., the only difference consisting in elaboration of rooms, and specially the collecting of rain-water from the roofs in cisterns.

THE OSORKON HOUSE AT SAMARIA.—This house belongs to the early post-Israelite occupation of the site, and is built partly over the destroyed walls of the ostraca house. It measures over 43 feet long and about 27 feet wide. The door is on the north side, and leads into a room or court about 23 by 13 feet.

On the west of this court are two rooms exactly 10 feet square, connected by a door; and on the east side is a long room, 23 by 10 feet. This room may also have been subdivided.

The walls rested on the rock. The masonry was of large stones, "not fitted by dressing, but well-built," the crevices being filled up with small stones. The walls varied from 34 to 40 inches in thickness.

The fragments of a jar, bearing the name of Osorkon II, were found in the central room or court.<sup>1</sup>

#### TELL ES SAFI (GATH): A RECEPTION CHAMBER, LATE ROMAN

Built on to the city wall of Gath on the south side was found at 17 feet depth a chamber 20 feet long.

The walls had been plastered with "unslaked lime" to a depth of 3 to 4 inches. Round three sides of the room ran a low divan made of closely joined blocks of limestone. The surface was absolutely smooth and the front edges rounded, worn by sitting. The stone is very soft, and several marks, such as a pentacle, circles, a rude maze, and a draught-board, were scratched on it.

This had evidently been a reception room, and is of later date, apparently late Roman.

With this divan compare that found in a small house of the early Israelite period at Jericho.

### GRANARIES

Granaries, or grain store chambers, are characteristic of all periods.<sup>2</sup> Some were merely store chambers attached to private houses, but others were public granaries, as the amount of grain found in them, as well as their size, indicates.

Many of those found had been burned, as at Tell-el-Hesi and Gezer. They were of various forms.

1. Some were circular pits or structures varying greatly in size, being occasionally only 32 inches in diameter. Such pits were found all over the ruins of Gezer. Several are deep pits covered with plaster, one, dating about 1200 B.C., measured 57 inches in diameter and 81 inches deep.

Many of these circular pits, however, were used as ashpits, as the potsherds and other waste rubbish found in them indicated.

<sup>1</sup> See *Samaria*, I, 141, and Pl. 54b.

<sup>2</sup> *Gezer*, I, 199-202.

Occasionally pits dug in the earth with no stone lining or plaster were found. One of this class, belonging to the Hellenistic period, measured 4 feet across.

A house at Gezer (see plan) has been referred to above as containing a number of these circular granaries. It belongs to the period 2500-2000 B.C.

2. Occasionally, as in the house (Gezer, Pl. 49, 1) of the same period (2500-2000 B.C.), a store chamber is divided into a number of bins for grain.

3. The granary of the "palace" at Gezer of the same period (2500-2000 B.C.), described above (Public Buildings), is a large room, and was found full of wheat, while a round-ended annexe on the south-east side contained *kursemmi*.

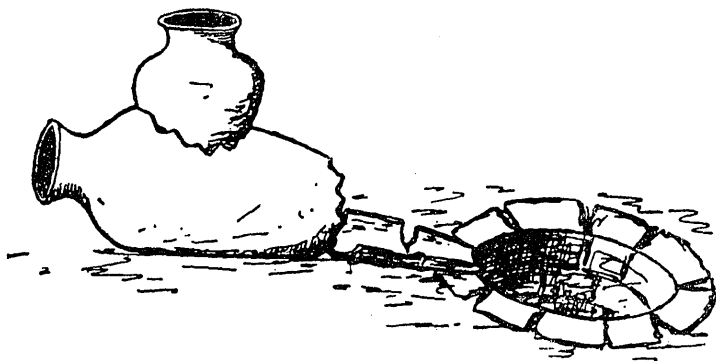


FIG. 2.—DRAIN OF POTSDHERDS.

The walls are 30 inches thick, and the floor is of beaten mud. Under it were found two drain pipes, wide at one end and very narrow at the other to fit into each other, of very coarse drab pottery full of stone chips and  $\frac{1}{2}$  inch thick. The drain lay on a bed of potsherds. At the end of one pipe is a funnel-shaped fragment of another pipe, turned obliquely downwards for the drain to empty itself into. This drain probably belonged to a still earlier building, and may have led into some sort of cesspool or what served for it.

4. A large granary of the III Bronze period (1600-1200) consisted of several rooms, built on the old city wall.<sup>1</sup>

One room was almost full of corn, but it contained a store of bricks as well, which were both baked and unbaked. Several

<sup>1</sup> For Plan, see *Gezer*, Pl. 49, 9.

of these bricks were scored with three strokes, to make the mortar take hold of them, and one had a spiral.

The two rooms on the south end held wheat, the other three contained straw. Another room was divided into five compartments or bins by dwarf walls. All had been burned, and a burned skeleton was found in the north-west corner of this subdivided room.

Another large granary of the same period<sup>1</sup> consisted of two large rooms, each room subdivided by irregularly placed walls.

5. Occasionally, attached to large thick walls which had belonged to some public building, *vertical hollow shafts or pits* are found in the thickness of the walls, measuring about 27 inches in diameter. One such wall with a pit in it was found in the early Hebrew stratum at Gezer.<sup>2</sup> They occur even in city walls, one being found in the inner face of the second wall of Gezer.<sup>3</sup> It goes right down to the rock surface. There was nothing to explain the use of purpose of them.

6. The circular stone pavements of the Hellenistic period at Gezer, measuring sometimes 9 to 10 feet across, were probably the floors of circular grain-stores. One of these was found in the Middle Bronze Age stratum—2000-1600 B.C.

A series of such chambers is shown on G., Fig. 90, where there seems to have been a group of six circular pits encased in solid masonry, broken into by later masonry. This set belongs to the early Amorite fortification of Gezer, and dates about 2000 B.C. or earlier. At Sharbanba, Goshen, I found a set of six brick-built circular pits encased in a massive brick platform and abutting on the town wall.<sup>4</sup> These are named the "Pits of Joseph" by the Arab inhabitants today, and they belong to the Hyksos period (2000-1600 B.C.).

The curious structure shown in *Gezer*, Pl. 1, Fig. 92, seems to be a similar pit, with a later foundation wall cutting through it. Similar circular corn-bins have been found (1929) between the two walls of Mizpah (Tell en Nasbeh),<sup>5</sup> with which we may compare the "casemates" at Kirjath-Sepher (Tell Beit Mirsim), and probably the curious chambers between the walls of Jericho. In these two instances the chambers are oblong, not circular.

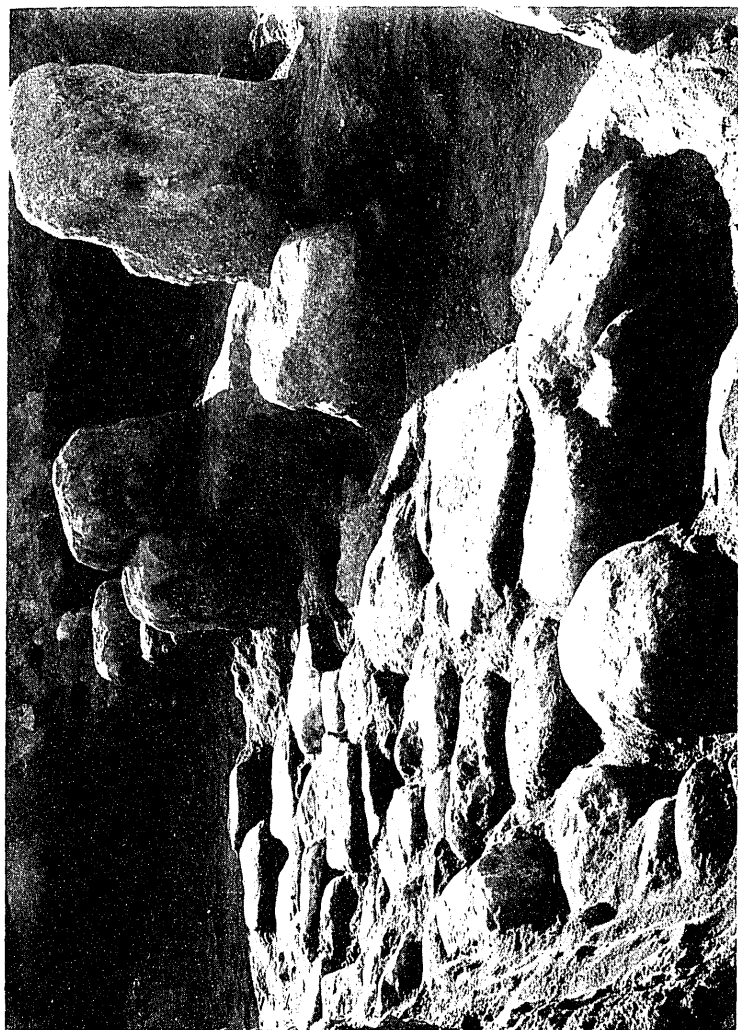
<sup>1</sup> G., I, 202.

<sup>2</sup> See *Gezer*, Pl. 5, col. 3.

<sup>3</sup> See Pl. 3, 21A.

<sup>4</sup> See *Acc. of O.T.*, p. 74.

<sup>5</sup> *Q.S.*, January, 1930, p. 12.



PAVEMENT OF COURTYARD WITH DOOR.  
EARLY HEBREW HOUSE—BETHPELET.



ROCK-CUT STEP-CISTERN OR STORE—OPHEL (ZION).  
PROBABLY SOLOMONIC.



STEP-CISTERN—HELLENISTIC 550–100.  
BOTH PLASTERED. GEZER I. 275.

facing p. 19.

## WATER-SUPPLY

## CISTERNS

There is no more welcome gift that can be offered to a modern Palestinian, who is not living in the neighbourhood of a powerful spring, or a stream, than a cistern. When we excavated Ophel, the owners of the fields, which are now market-gardens, begged us to leave at least one cistern open for them for the collection of surface drainage, and the watering of the crops.

Sennacherib was well aware of this when he made his Rabshakeh guarantee to the people of Jerusalem that each would possess his own cistern (2 Kings xviii. 31). Probably there is a reference here not only to the fact that many had no cistern, but also that frequently several shared the same cistern, an arrangement which certainly does not work well in Jerusalem today.

*I. Rock-Cut Cisterns*

From early times every city had its rock-cut cisterns to supply the needs of the people in time of siege. The rock is, therefore, honeycombed with cisterns, one set aside for "each group of houses."

Naturally, many fell into disuse, and new ones were made, so that all these "pits" found were never in use at the same time; but it is by no means easy to assign cisterns to their proper date, because even in late times it was quite usual to go right down through accumulated debris, and cut the under portion of a cistern in the rock, raising it to the required level by plastered stone walls. Frequently the diggers hit upon an ancient cutting in this way and reused it.

*Plan.*—The commonest form, which is closely adhered to throughout every period, is the *bottle-shaped* cistern. An excavation, usually circular, sometimes square, is sunk in the rock to a depth varying from 16 to 23 feet. The floor varies in width from 11 to 26 feet. The sides are often vertical up to a certain height, and narrowing from that point to the shaft opening. Often the sides taper to the roof from the floor upwards like a cone.

The only opening is generally a circular hole, about 3 feet in diameter and  $4\frac{1}{2}$  feet deep. If necessary, this shaft is heightened to the level of occupation by masonry, and these





ROCK-CUT STEP-CISTERN OR STORE (OPHELIAZION)

(KOPPELVA, SOUTH SIDE)



STEP-CISTERN HELLENISTIC (500-100

B.C.) (CLASPER)

(KOPPELVA, 75)

Looking up the

## WATER-SUPPLY

## CISTERNS

There is no more welcome gift that can be offered to a modern Palestinian, who is not living in the neighbourhood of a powerful spring, or a stream, than a cistern. When we excavated Ophel, the owners of the fields, which are now market-gardens, begged us to leave at least one cistern open for them for the collection of surface drainage, and the watering of the crops.

Sennacherib was well aware of this when he made his Rabshakeh guarantee to the people of Jerusalem that each would possess his own cistern (2 Kings xviii. 31). Probably there is a reference here not only to the fact that many had no cistern, but also that frequently several shared the same cistern, an arrangement which certainly does not work well in Jerusalem today.

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continuations or their absence are often a safe guide as to the period of the cistern's use. In a very few cases the shaft is oblong or square. In one known case the opening was on a side, not on the top.<sup>1</sup>

The walls, even when entirely rock, are covered with the local substitute for our cement, a mud plaster in which powdered limestone predominates. When we consider that the rock is usually so soft and porous, and this plaster so easily affected by water unless baked to pottery by fire, it is difficult to understand how these cisterns could have failed to leak. "Broken cisterns that can hold no water" was a simile, therefore, that every Hebrew could well understand.

*Filters.*—In many cisterns, though by no means in all, a hollow was made in the floor and plastered. Sometimes this is very small, but occasionally it measures as much as 4 feet across and 2 feet deep. This hollow is intended to catch and retain any mud or sandy sediment, so that the vessel dropped for water need not disturb it. The modern Arab calls it a *musfei* or filter, and the floor was made to slope slightly towards it. This indicates that the cistern was filled by rain surface drainage as in the case of many modern cisterns today among the Arabs.

*Gezer.*—In Gezer they had a fine spring, down to which a great tunnel staircase was cut, probably in the cave-dweller times or in the first Amorite occupation; but, after the debris of successive cities had accumulated to several feet in depth, this spring was abandoned and forgotten.

*Urusalim.*—In Jerusalem they had the spring Gihon and the well En-Rogel, both outside the walls of the city. In times of peace they could use both; and to meet the exigencies of war, the waters of Gihon were made accessible from the interior by tunnels made also probably in the time of the earliest Amorite occupation. In Jerusalem the waters of this intermittent spring Gihon continued to supply the city throughout its history. The earliest pool of Siloam was fed by its waters brought down from Gihon in a conduit cut on the face of the rock and concealed by a covering of slabs and earth. This did not work satisfactorily for many reasons. The conduit could be blocked, or the water run off at any point. Its exit from Gihon could be got at by a besieging army, and its entrance beneath the city wall might prove a

<sup>1</sup> G., I, 270, Pl. 5, 2.

source of danger. Hence it was replaced by Hezekiah's tunnel running right through the heart of the rock to a new pool of Siloam built just at the south-east extremity of the rock of Ophel.

Though the rock of Ophel is full of excavated chambers therefore, few, if any, of these were originally cut to serve as cisterns; and such as were cut for cisterns belong to a late period of occupation, when the waters of Gihon had become brackish and people preferred to collect rain-water from the roofs of their houses, or from surface drainage.

In the ancient city of David, on Ophel, therefore, we find no rock cutting which we can with certainty describe as a cistern of early Amorite times, though we find these rock tunnellings which rendered them unnecessary.

The people of Gezer allowed their cisterns to be silted up for want of cleansing, and their successors as a rule preferred making new cisterns to cleaning and reusing old ones. Yet one cistern had been in use from about 1800 to 100 B.C., for pottery of all periods from Mycenæan to Maccabean were found in it.

## II. *Other Types of Rock-Cut Cisterns*

(1) CAVE-CHAMBERS CONVERTED, II BRONZE AGE, 2000-1600 B.C.—(1) In the earliest period, prior to 2000 B.C., we frequently find rock-cut underground chambers of the cave-dwellers converted into cisterns.

Often these chambers are extended and deepened.

Traces of steps for entrance are sometimes left, which show it was originally a cave-dwelling.<sup>1</sup>

Cave 27, I, at Gezer, is a good example of this adaptation.<sup>2</sup> At the north end the entrance stair of the original cave remains, and cannot have been used for cleaning the cistern, for it is partly built up with masonry. Seven feet breadth of the original floor is left; the rest of it is excavated to a depth of five feet more. The complete depth is nearly 21 feet, and the largest diameter almost 39 feet. The walls are covered with a very hard plaster. This cave seems to have been used as a cistern as early as 2000-1800 B.C., though the plaster may be later.

The entrance consisted of a hole made in the roof of the cave, and a built circular shaft 3 feet high was added to bring it up to the level of occupation. At this level a channel 10

<sup>1</sup> See *G.*, I, 269.

<sup>2</sup> See *G.*, Pl. 13, 2.

inches wide, built of stones set on end side by side, ran for 13 feet on the surface to north-west, and then turned north-east for 4 feet, where it was lost. Whether this was a feed-channel from a rain-collecting surface to the cistern, or an irrigation conduit from the cistern to a field or garden, is not determined. It is, however, an early example of the use of open drains, such as are still used anywhere today. The stones were 8 inches high.

Many years afterwards this excellently plastered cistern was still in use; the shaft had been heightened another 5 feet to bring it up to a later level of occupation, without any other alteration on the cistern, incidentally showing the great value set on a really good cistern that did not leak.

Other examples are referred to in our description of caves.<sup>1</sup>

(2) One cistern was found at Gezer of unique shape and of the earliest period, the pottery found in it being of the Early Bronze Age or Neolithic period.

It is shaped like two rather deep bowls placed above each other with mouths down, narrowing to a sloping shoulder with a cylindrical shaft above it.<sup>2</sup> It is only 13 feet deep and 8½ feet in diameter at bottom. There are two footholds in the shaft as if for entrance. See Fig.

(3) In some cisterns of the earliest period prior to 2000 B.C. the shaft descends from the bottom of a large circular hollow cut in the rock surface. This hollow may have acted as a sort of collecting filter for surface drainage running into the cistern, but it certainly must have been cut when the rock surface was bare, and thus proves the cistern to be of the earliest period of occupation. This is confirmed also by the pottery found in the examples at Gezer,<sup>3</sup> which is all prior to 2000 B.C. In one example this filter-hollow is 8 feet across and 32 inches deep, and the shaft is over 6 feet in diameter and 7 feet deep. The chamber itself is bell-shaped, 16 feet across at bottom, and over 15 feet deep. As the shaft is almost as wide as the hollow itself, it is possible that the hollow was simply the preliminary cutting giving extra space for the work.

From the mouth of many cisterns *radiating grooves* were cut in the rock surface probably for bedding the masonry of a shaft. Rock-cut cisterns are also found outside the city walls on the surrounding hills of Gezer.

<sup>1</sup> See G., I, 270.

<sup>2</sup> See G., Pl. 13, 3.

<sup>3</sup> G., I, 271.

### III. *Built Cisterns.*

At Gezer masonry reservoirs were found, but they belonged to the Hellenistic period, 550-100 B.C. Naturally, when the debris of successive occupations had accumulated to a depth of 20 to 30 feet, it was no longer possible to cut cisterns in the rock itself, and stone buildings were substituted.

A hole was excavated of the shape desired, and apparently as near as possible to the size intended. Round its sides walls of stone laid in mud mortar were built, and afterwards plastered with two or three coats of mud plaster. In Roman and Byzantine times this plaster was well mixed with powdered limestone. This plaster seems to have been baked hard by lighting great fires inside the cistern so that it comes away from the walls in large sheets. Such cisterns were roofed by a rough arch. The shaft was built up to the necessary level, but frequently where the cistern had been reused at a later date, the shaft has been heightened by additional masonry. The shaft in these is usually square or oblong.

A great number of these built cisterns were found in our excavation of Ophel, chiefly of the Byzantine and Crusader periods. As the walls and the roof were completely surrounded and covered by earth, no great care was spent on the masonry. It was often very slim and of small undressed field stones, so that, if we uncovered it all round, it was in danger of collapse.

Some of the walls were not only plastered, but covered with a heavy coat of dark brown paint or ochre. These were of the Byzantine period.

*Step-Cisterns.*—Many of these cisterns are step-cisterns. Broad steps of rough masonry, well covered with plaster, and running the whole breadth of the cistern, led down to within 3 feet of the bottom. This bottom space was frequently not more than 3 feet wide and 10 to 12 feet long, so that at first one is apt to mistake the cistern, or set of cisterns, for a bath. Such cisterns could not have held much water. One of those which we found on Ophel had been split by an earthquake or by the slipping of the debris above it, from top to bottom. It was literally "*a broken cistern which can*

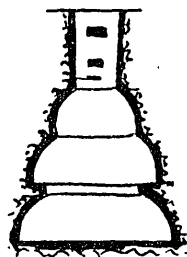


FIG. 3.—DOUBLE BOWL CISTERN, 2500 B.C.

*hold no water."* It was built into the surface of the Jebusite east wall.

Another which we found on the south side of what Dr. MacAlister has described as a Millo Tower had its lower section cut in the rock, and the under portion of the walls were rock. The remaining steps and the rest of the walls were of masonry, an old wall, which was attributed to Hezekiah, being used as its eastern side. This had apparently been originally a rock-cut store vault with several steps leading down to it, which had belonged to an earlier period. When it was made into a cistern, the builders used only part of it and ran a wall across it, reducing its size by half, so that the cistern is probably Byzantine. The plaster was undoubtedly Byzantine, and the cistern had belonged to the Byzantine house which stood above it.

Other three cisterns, partly built and partly rock-cut, were found quite near to this one. In all, the plaster was Byzantine and the pottery late.

In some of these built cisterns, however, especially in those of earlier date, the masonry is superior to that of the dwelling-houses.

The large cistern in the palace of Ahab at Samaria, is an example, and is described further on.

One cistern at Gezer of the Hellenistic period (550-100 B.C.) appears to be an earlier built reservoir reused.

Here the masonry is excellent and resembles that of the towers of the outer wall which are attributed to Solomon. Some of the stones have a marginal draft with the bosses dressed off; and in the cistern many stones were found finely dressed with oblique strokes of a chisel  $\frac{3}{8}$  of an inch wide. Some stones had been cut so as to form part of an arch and had probably belonged to the roof. The plaster still adhered to many of the stones, showing it had been a reservoir. This, therefore, had probably been a reservoir built by Rehoboam, who may have used some stones from a building erected by his father Solomon, though the chisel used in dressing is smaller than appears from other Solomonite dressing. It had been unearthed and reused in Hellenistic times.

#### THE POOL OF SAMARIA: PERIOD OF AHAB.

The northern wing of Ahab's palace consisted of a court with a series of store chambers running round it.

In this court was a large reservoir, close to the southern front of the chambers. It measured originally 34 *by* 17 feet, and the depth was *over* 16 feet. Later, it had been reduced in size to 20 *by* 16 feet, while the bottom level had been raised 4 to 8 inches by a heavy coating of plaster. A basin 3 feet deep, and *over* 40 inches larger all round than the final pool, had been cut in the rock. The floor of this basin had a slope to the north-east corner, and this unevenness was levelled up by a flooring of heavy slabs. The cistern was built inside this basin, the walls being of considerable thickness. They consisted of blocks 20 *by* 28 inches, not fitted, but laid in plaster. The corners were turned by *placing the blocks diagonally*. The sides and bottom of the cistern were covered with a layer, or several layers more likely, of greyish plaster to a *depth of* 4 inches. This was mixed with wood ashes, and was as hard as the masonry itself.

*Note.*—This plaster seems identical with the plaster which we found on Crusader cisterns and stores on Ophel. It had been hardened by wood fires lit in the cistern to dry and bake the plaster. The hardness and the mixture of wood ashes on the surface are identical. The plaster may therefore belong to a later occupation, perhaps of the Byzantine period, for the baking of the plaster would suit that period as well; and originally there may have been no plaster on the walls of the cistern.

#### ANCIENT CISTERN NORTH OF THE MACCABEAN PALACE AT GEZER<sup>1</sup>

This enormous cistern was cut in the rock, and altogether it was 59 feet deep. It was really a cistern on top of a cistern. The upper section was 57 *by* 46 feet, and descended to a depth of 29½ feet. In the floor at this depth another cistern was cut, measuring 27 *by* 24½ feet, and again 29½ feet deep. It is cut in very soft porous limestone. In the walls are many hollows and projecting bosses, showing the method of quarrying by wedges. They are covered all over with two coats of hard plaster, each  $\frac{3}{8}$  of an inch thick, the outer coat being well smoothed. The cistern is considered capable of holding 600,000 gallons; but as to how it was filled there is no indication. It was obviously a public structure.

<sup>1</sup> G. I, 266 ff.



*Steps.*—Flights of steps led to the bottom. That in the upper section is partly rock-cut, partly of masonry. The lower flight is entirely rock-cut.

*Pottery.*—Imitation Samean ware in red and brown glaze was found in it. The oldest thing found in it was the jar-handle with the royal stamp "Mamshath" on it. All the other pottery belonged to the Hellenistic period, such as Rhodian jar-handles, Ptolemaic coins, and a curious little clay tablet about 3 inches long with the figure of a wild beast trampling or devouring a human figure. Bits of iron, some bronze, rough flints and bone pricklers also occurred. Though ware of the Maccabean period predominates in the filling, this merely proves that it was open in that period. There is little doubt, as Macalister says, that this is a very old cistern. A wall built round the mouth of it, and resting on the rock, seems to be ancient masonry; the cistern had remained in use for many centuries, and had probably been plastered in later times.

#### THE MACCABEAN CISTERN AT GEZER

This well was a late attempt to procure a supply of water for the town. It is built in the debris, and the floor and walls are covered with plaster. In the eastern end of the floor this plaster lies on the rock surface. At the western end the slope of the rock is levelled up by masonry and the plaster rests on it.

The chamber is about  $16\frac{1}{2}$  feet deep, but only 32 inches of the walls remain. The walls had been built of drafted blocks, one bearing the same mason's mark as found in the Maccabean palace. This dates the cistern to the same period. The shaft was built of well squared and well dressed blocks. Cut in the floor of this chamber a circular shaft about 10 feet wide and 7 feet 9 inches deep led through the debris and then expanded. This rock-cut shaft was cleared to 35 feet below the floor of the upper chamber, but it continued still further. It was filled almost exclusively with large stones, obviously the work of an enemy determined to make the well useless for all time. It is possible that this expanded shaft went down to tap the water at 120 feet depth.<sup>1</sup> The whole was probably made by Simon Maccabæus or John Hyrcanus as a precaution against siege.

The stones of the cistern or shaft were not drafted and the

<sup>1</sup> See G. I, p. 281.

many drafted blocks found in it must have come from older buildings disused.

For cisterns inside houses, see Hellenistic houses. Plastered cisterns of late date are shown on the walls of Jerusalem (Ophel).

### MODERN CISTERNS

Where a new house is being erected today in Jerusalem, the first part of the work is the making of the cistern, which often underlies the whole area of the building like a great cellar underground.

As the houses are built on rock, the cisterns are all cut in the solid rock and the excavated material is used in building. Where the rock is porous, precautions are taken to prevent leakage. The whole procedure is very much the same as was followed thousands of years ago in Palestine, and a house is valued more by its cistern capacity than by any other feature of its size or architecture.

As to the use of rain-collecting cisterns in the early Hebrew period, the Inscription of Mesha is very instructive. Lines 24-25 of that inscription show that a large public cistern was the usual arrangement in every city at *c.* 900 B.C. ; and, since there was no such public cistern in his capital, Mesha advises every householder to make his own cistern. This refers to Moab, but it is a safe inference that cisterns filled by rain were common by that period in Israel and Judah also.

### SKELETONS

Frequently human skeletons, as well as bones of dogs and other animals, are found in these rock-cut cisterns. It may be that the mouth being left open a person or an animal had fallen in. If so, it is remarkable that no attempt was made to remove the impurity. In a cistern which was in use in 2000 B.C. a human skeleton was found.

There is, however, the other possibility that from the earliest times disused cisterns were used as "prisons," from which there was no escape, for getting rid of troublesome people ; and that those bodies were lowered into them when the cisterns were empty and the accumulated mud in the bottom still soft.

This is what happened in the case of Jeremiah, as recorded in Jeremiah xxxviii. 6. Similar treatment was accorded to Joseph by his brethren (Gen. xxxvii. 24). Accepting the

two incidents as historical, the first happened about 700 and the other about 1800-1600 B.C. The finding of these skeletons in cisterns thus probably confirms the practice of using empty cisterns for putting away undesirable people.

In several early cisterns bars of bronze, and in later cisterns bars of iron, have been found, which may have been a precaution against accidents, being used to cover the mouth of the cistern, and there is no doubt that many of these skeletons were the result of accidents. Disused cisterns were also later used as ashpits for broken pottery, bones, and other waste rubbish.

### STAIRWAYS

Stairs have been in use from the earliest times in various forms.

CAVE-DWELLER.—In the underground rock-cut chambers of the cave-dwellers' houses elaborate stairways were left running round the sides of deeper chambers and giving access to them from chambers on a higher level. These "spiral" or winding stairs have been described under "Cave-dwellings."

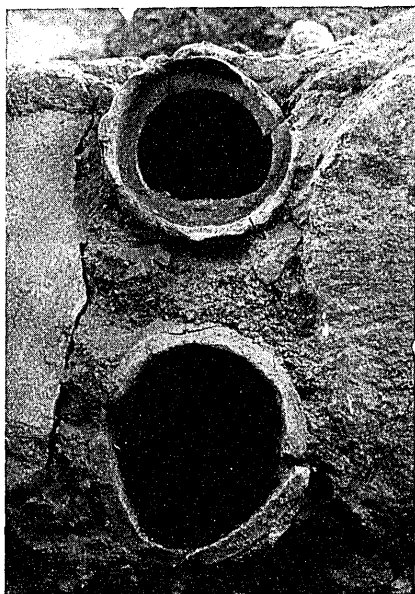
Later, in the early Amorite period of fortified cities, occasional fragments or traces of stairs leading to the roofs of houses have been found. These also have been referred to—*e.g.*, holes for beams or steps between the "double brick walls" of Jericho, p. 8,<sup>1</sup> and similar holes on the same inner wall in the house described in vol. i. 155. These date about 2000 B.C. For similar traces of wood beams for steps at Gezer, see p. 201.

No instance, however, has been found of a stair inside a built dwelling and leading to an upper storey. If there were upper storeys in early dwellings, which is doubtful, these stairs would probably have been built outside and made entirely of wood, as they frequently are in Arab houses of today.

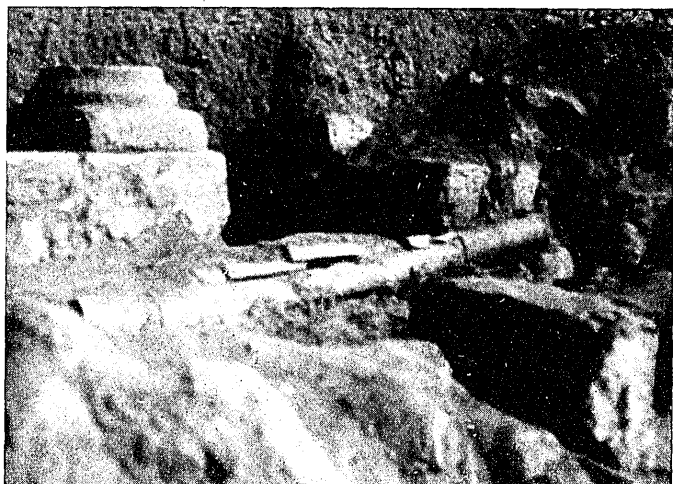
GEZER.—An outstanding instance of stairs is that of the water tunnel of Gezer cut in the rock<sup>2</sup> and believed to be of the cave-dweller period or the earliest Amorite occupation, dating prior to 2500 B.C. A similar underground stair leading from the fort to the spring in the hollow at the town Es-salt, the site of an early fortress, has been published by me, and is described above.

<sup>1</sup> See vol. i. 120, 155.

<sup>2</sup> Cf. also the stair in Cave 16, III, with a right-angle bend. See under Religion, p. 46.



CESSPOOL PIPES OF EUSEBIUS' HOUSE  
ON OPHEL.



RAIN CONDUIT FROM ROOF TO CISTERN OF BYZANTINE HOUSE  
--OPHEL.

facing p. 28



WINEPRESS—WA'RET SALAMEH—GEZER II. 52.



PORTABLE PRESS—OPHEL.

facing p. 29.

JERICHO.—Of later date, probably between 2000 and 1800 B.C., is the series of stairways in Jericho between the old double walls of brick and the latest or outermost wall. Their purpose has not been discovered, but they may have been used in the removal of the old brick walls. They fell into disuse immediately (see vol. i. 120), and houses were built over them.

SAMARIA.—Of the Hebrew period the finest example is the grand stairway, 80 feet wide, at Samaria.

This stairway consisted of twenty-four steps, each about 15 inches broad and  $7\frac{1}{2}$  inches high, making a total height of about 15 feet.

It is the staircase which led up to the temple built by Severus, but probably follows the design of the original Herodian stairway.

Of the *Hellenistic* period an example of a stair leading to the roof is given from Gezer on p. 207, and of the Roman period from Tel-ej-Judeideh.<sup>1</sup>

*Steps in cisterns* are dealt with under Cisterns and under Caves—e.g., Cave 28, II.

*Foot-holes* and *toe-grips* are referred to there also. Of the use of stairways in streets or lanes where the slope is broken by a succession of terraces, as in modern Jerusalem or Es-Salt, an example was found on Ophel in 1925 (Field 5, Pit C) of the Maccabean period (c. 150 B.C.).

Stairways thus date from the earliest period in Palestine, and have been in constant use from the days of the cave-dweller to Roman, Byzantine, and modern times.

Some of the "winding" stairs in caves were furnished with side protections in the shape of parapets cut out of solid rock like the stairs themselves. See Shephelah Caves, vol. i, 24, 25.

The stair-bastions of Jerusalem of early date and the "stairs of the City of David" are further examples.

## DRAINS AND CONDUITS

Fragments of drains have been found in almost every site, but usually so ruined that it is impossible to say where they led from or what purpose they served.

STONE DRAINS.—At Gezer such drains consisted of a

<sup>1</sup> See vol. i. 227.

double row of small stones set on end and cemented together with mud-mortar. The floor of the drain was paved with stones or hard-packed mud.

Occasionally they were found covered by similar flat stones laid across.

Some of these date as early as 2000-1800 B.C.

**DRAIN-PIPES.**—Early Amorite, 2500 B.C.

The oldest drain-pipes known are the two pottery pipes found beneath the beaten-mud floor of the Early Amorite palace of Gezer which dates about 2500 B.C. These pipes are of coarse, drab ware full of stone chips, and  $\frac{1}{2}$  inch thick. They are wide at one end and taper towards the other, thus fitting into each other. They led into a funnel-shaped trap of the same material, turned obliquely downwards. This drain seems to belong to a building earlier even than the palace itself, and probably led to a cesspit.

The ware is unquestionably of very early date. These pipes were laid in a bed of potsherds. Such pipes, dating in the fourth millennium B.C., have been found in Babylonia.

**STREET DRAINAGE AT 1450 B.C.**—In the pre-Amenophis level (1450-1412 B.C.) at Bethshan three cylindrical pottery drain-pipes, each having two handles, were found, two of them *in situ* below the surface of the street. They stood upright, the smaller end of the upper one inserted into the larger end of the lower pipe. The mouth of the upper had originally been on a level with the street, while the lower rested on a few undressed stones.

These closely resemble the Cretan drain-pipes with handles of the Middle Minoan I Age (2100-1900 B.C.), and evidently they were used for street drainage.<sup>1</sup>

**DRAIN-PIPES.**—In the late Roman and Byzantine periods drain-pipes of red baked pottery, narrowed at one end so as to fit into each other, became common.

In the "Eusebius" house in Field 5 of Ophel,<sup>2</sup> which is of Early Byzantine date, we found a room from which a drain of pottery pipes led to a cesspool; and from that cesspool two overflow drains led out. One had been choked, and a new drain substituted later (see Plate facing p. 28). The photograph

<sup>1</sup> See Evans, *Knossos*.

<sup>2</sup> So called because the maker's name, Eusebius, was found stamped in Greek on one tile.

shows that the later drain is of whole pipes and the earlier of half-pipes.

In the Byzantine house which stood on the so-called "Millo" Tower in Field 5, the rain had been collected and led from the roof into a large rock-cut plastered cistern near, by a similar drain of round pipes, laid on a bed of plaster, made of powdered lime and very hard (see Plate facing p. 28).

In this drain the pipes were complete cylinders, as also in one of the drains leading out of the cesspool; but in the other drain of the Eusebius house the Eusebius-stamped pipes were made in half-sections, as the photograph shows, the sections being cemented and the pipes laid in lime plaster.

JAR DRAINS.—At an early period a substitute for drain-pipes was found by using large pointed-base pots, with the bases broken off. The pointed end was fitted into the mouth of the next jar, and the junction sealed with mud.

Such drains were found at Gezer of the Early Hebrew period, 1000-600 B.C.

VERTICAL-BUILT DRAINS.—At the northern corner of the great tower of the east wall, which I uncovered on Ophel, I found a small vertical drain not more than 6 inches square, which had apparently run from the top to the very foundation of the tower, and had evidently been used for carrying away surface drainage. A fine Hebrew lamp was found inside it, dating *c.* 1000 B.C.

Only one such drain was found at Gezer, but vertical drains made of jars, as described above, were found, and one drain was found made entirely of potsherds.

Between the walls of the third fortress of Gibeah (ninth to seventh century) two vertical-built drains of polygonal or roughly circular shape, 22 to 24 inches in diameter, were found. These had obviously been intended to carry away surface drainage and prevent the heavy rains from undermining the outer wall. The form is unique so far (Albright, *Tell el Ful*, p. 21).

ROCK-CUT OR STONE-CUT CHANNEL.—One channel of the Hellenistic period (about 550-100 B.C.) was cut on a row of stone slabs for 2 feet, and led into a trough 24 by 21 inches, evidently in the floor of the chamber.

That there was some sort of drainage or sewage system even in Ahab's time, is very interesting. It is the earliest in Palestine, so far as I know, excepting, perhaps, the street-drain of Bethshan recently discovered, which dates *c.* 1450 B.C.



As the rock surface on which the palace is built slopes towards the north, the drainage was naturally in that direction. Under the floor-level of the ostraca house on the great court of Ahab, was found the beginning of a small channel cut in the rock, "with a series of small gutters opening into it." This was traced northward to where the Roman vault on the court has demolished all traces of previous building. Inside the vault was a deep rock-cut irregular basin (?), the east side of which had been cut away (probably at a later date) by the insertion of a door with jambs. The bottom of this basin (which was probably a trap or cesspool) was considerably below the level of the channel. Outside the north wall of the vault ran another small canal, cut in the rock, in line with the other channel and the trap, but on a level higher than the bottom of the trap—which is what we should expect if the basin was a trap or cesspool.

The channel running north from the basin was 40 to 43 inches deep, and about 18 inches wide. It was roofed with large, thick slabs of stone. It had a gradual slope toward the north, and just before reaching the outer wall turned sharply to the west, and passed into the outer wall. Here it was lost, and no exit was found.

This system of channels was cut in the rock surface, and appears to have been intended to carry off the surface drainage of the court during the rains. The trap in the rock would catch any mud or refuse and prevent the drains from getting choked. There seems no reason to suppose it was a sewage system with a cesspool and an overflow drain, but the scheme is surprisingly modern.

On Ophel, in the Eusebius house, we found such a cesspool, partly built and partly rock-cut. It was undoubtedly part of a sewage system under the house, but the house belonged to late Roman and Byzantine times.

**STONE-BUILT DRAIN.**—In a pre-Herodian house (A) at Samaria a drain about 12 inches wide by 10 inches deep, built of small stones set on edge and covered by flat slabs, either drained the open court or carried away the water from a bath adjacent to it. It ran down under the centre of the street.

One of the side stones next the house had a small square hole in it, as if to admit the contents of a side drain. From the house it had a steep fall, but afterwards followed the slope

of the street. This suggests some sort of town-drainage system, similar to that recently found at Bethshan.

The remains of a drain of an earlier period were found near by.

Similar conduits were found leading into cisterns as feeders (*S.I.* 146). See p. 22 above.

Samaria thus shows us that while the rock surface was within reach drains were cut in the rock. Later, when debris had accumulated, drains were built in the debris.

Small built stone drains are common in the later periods. In Field 7 of Ophel I found a very fine example of a small stone-built drain running from what had been a late Roman or Byzantine house probably to a cesspool.

We may thus take it that, as a rule, rock-cut channel drains are naturally preferred where the rock surface is near, and built drains are used where debris has accumulated.

In the atrium house of the Roman period at Samaria, a conduit led north-east, but remains of earlier drains were also found (*S.I.* 184).

The sewer running out under the threshold of the Maccabean palace has been described under the head of Hebrew Large Public Buildings (see vol. i. 265).

A fine example of a stone-built channel was found at Gezer. Cave 27, I, had been converted into a cistern. At the level of the opening this channel, 10 inches wide, built of stones set on edge, ran for 13 feet north-west, and then east for 4 feet, where it disappeared. This may have been a rain-collecting channel for feeding the cistern, or an irrigation channel. It was 8 inches deep (see p. 22). It dates between 2000 and 1600 B.C.

At Tell Zakariyeh a stone-built drain runs below the repair on the west wall of the fort. The fortress is attributed to Rehoboam, 950 B.C. The repair is later. Evidently there had been an habitual accumulation of water-drainage at this point which undermined the wall, and the drain was added to correct this (see vol. i. 222). The drain is 39 inches in section.

Of the *Hellenistic* period at Gezer an example of an overflow channel leading from a cistern to a reserve cistern is described under the Hellenistic house on p. 15. This cistern was fed by a conduit from the roof.

ROMAN CONDUIT.—The most elaborate drains I have seen in Palestine are the water conduits built by the Romans, which may be seen in various parts of the country.

Near the south end of the Sea of Gaililee I found one section of the stone conduit by which they brought water to Tiberias. Each section is a block about 18 to 20 inches square. Each is pierced by a perfectly smooth, round hole 9 to 10 inches in diameter, and each has a flange which was made to fit into the section it joined to.

### WINE- AND OLIVE-PRESSES

There seems little doubt that the primitive cave-dwellers cultivated grapes and olives. They made and used rock-cut presses for extracting the juice from the olive and the grape. Fruit presses were found on the surface of the rock both in Gezer and the ancient Jerusalem. These had been cut before any buildings were there, and in one case at Gezer a press was actually found inside a cave. The oldest form is a cylindrical vat cut in the rock with a small round hollow in the bottom for collecting the last drops of the juice. This vat may be rectangular, oval, or circular. Similar presses are found also on the rock on bare hill-sides, where no town ever stood.

Some of these primitive presses consisted of,<sup>1</sup> or were surrounded with, cup-hollows, connected by channels with the central vat. These may have been filters to allow the sediment to sink.

Compared with wine-presses, olive-presses are shallow, 12 to 16 inches deep, the method used for extracting the oil being pounding. For treading the grapes deeper pits were used. This is a safe distinction. As compared with cisterns, presses are generally of greater length and breadth than depth.

The usual olive-press consisted of a shallow vat, a channel to carry away the oil, and another deeper vat at a lower level to collect it. In this case the pounding vat is usually rectangular. Sometimes a filter vat is inserted midway between the pounding and the collecting vats, the channel continuing from it, and frequently the receiving vat has a spout for filling the oil into vessels.

Where there is no channel or receiving vat, they simply baled the oil out with jugs, the last drops being collected from the hollows in the bottom. Several of the fine Crusading

<sup>1</sup> The Ancient Press from Ophel seems to have been merely a series of rough cuts on the sloping rock surface, and the 12-inch channel carried the juice to vat on the left, not shown on the photo.

cisterns which we found on Ophel had originally been olive-presses, built walls being added to deepen them, as the presence of these collecting hollows in the bottom indicated.

In the smaller and primitive presses, whether fixed or portable, stones, rollers, and pestles were used by hand to crush the olives; in larger presses of later date a large stone wheel, made to rotate by an animal, was used. One such wheel found is 56 inches in diameter. After being crushed, the olives were squeezed by boards with weights to force out the juice.

PORTABLE PRESSES.—The portable press does not seem to have come into use till after 2000 B.C., but it continued down to Roman times. It is a circular or oval table of stone, 57 to 78 inches in diameter, with a raised rim, and a cup-hollow cut near the rim for collecting the juice.

Some had no cup, the juice being allowed to overflow the edge. One such had a groove running round the rim and ending in a spout carved in the edge, which led the juice into vessels below it. Many fragments of large, flat, four-footed shallow stone basins were found on Ophel. Some of these were probably small portable presses for use in the house; for there is no doubt that the mistress of the house had to find oil for herself, at times at least, just as she ground her own meal and flour before using it. Most of these fragments were basalt or other very hard material (see Fig. opp. p. 228).

Later presses are much more elaborate. In Roman times some of them had mosaic floors.<sup>1</sup>

<sup>1</sup> For fuller account, see *G.* II, 48 *et seq.*, and *E.P.*, *varia*.





WINEPRESS IN BYZANTINE HOUSE—OPHEL FIELD 7.



DO. SHOWING FILTER JAR AND PLASTER-BUILT CHANNEL LEADING TO VAT.

facing p. 36.



CUP HOLLOWS ON OPEN ROCK SURFACE—AT SAIKH AYUB (WELLS OF  
JOB) TRA.



FIREBOWL—BETH PELET.

facing p. 37.

## VI

### RELIGION AND CULT OBJECTS





## RELIGION AND CULT OBJECTS

### THE CAVE-DWELLER'S RELIGION

THE association of cup-hollows on a rock surface of the Neolithic period with underground rock chambers by a narrow funnel and connecting channels such as was found at Gezer, Caves 16 III, 17 III, 17 IV, 30 IV, 2 I, 28 II Room I, and at Ta'anach, suggests that the cave-dweller worshipped some form of deity, who, like the cave-dweller himself, dwelt in an underground chamber cut in the rock. It may be that they worshipped the shades of the dead, chthonic deities, but the mere fact that his deity dwelt in a cave underground is not necessarily a guarantee of that.

Solomon's God, Yahveh, dwelt in a temple above ground, which, however, was not regarded as confining his God to one place or even to earth itself. The cave-dweller naturally located his god in a dwelling similar to his own, just as Solomon did.

We have no sure indication of what nature of deity the cave-dweller worshipped, but these places certainly point to some form of religion.

The form of worship seems to have consisted partly in liquid offerings of blood and wine. Sacrifices of animals were also part of the ceremonial of worship, the blood of the slain animal and the liquid offering being allowed to flow down into the cave, the dwelling of the deity. In these sacrifices the pig seems to have been commonly used: and the traditional association of the pig with sacrificial ceremonial may be the origin of the Semitic aversion to using the pig as food—the pig being regarded as sacred.

Cup-hollows in the rock thus associated we may safely regard as having served a religious purpose. They were part of a "high place."

For flesh and liquid offerings in the O.T. see Judges vi. 20; xiii. 19.

## I. CUP-HOLLOWS WITH CAVES

GENERAL (*E. P.*, p. 189, etc.)

Cup-hollows are found all over Palestine and of every period. Many have been uncovered on the rock surface underneath town ruins as at Ophel, the site of ancient Zion, and Gezer; but hundreds of them may be seen on rock surfaces, lying open to the sky—*e.g.*, in Transjordan, near to the ruins of Herodian and Roman towns.

SIZE.—They vary greatly in size. Some are as much as 8 feet, and others 6 feet in diameter. These are perhaps the largest yet discovered. Others vary from 53 and 40 inches down to as little as 1½ inches across. In depth they vary from 24 inches down to shallow saucer depressions. A very common depth is 9 or 6 inches.

SHAPE.—By far the largest number are circular pot-like hollows. Many are oval with the long sides vertical, and the narrow ends sloping to the centre like a scoop. Many, again, are even rectangular, and some are cylindrical, as if for receiving and supporting poles. Some are mere shallow saucer depressions (these had probably been begun and left unfinished on account of the hardness of the rock); and many are mere tiny depressions like holes left by the removal of nodules. These also may be mere beginnings of unfinished cups.

TOOLS.—There is nothing to show what tools were used, since they are all smoothed and rounded by friction. Probably, however, they were cut in the earliest instances by flint chisels, later by flint or bronze chisels, and later still by iron tools. The hole thus roughly cut had been smoothed by stone pounders and rubbers of some hard material like flint or basalt.

DATE.—Where found exposed, as at Saikh Ayub (Fig. opp. p. 44), there is nothing to indicate what period they belong to. Where found below town ruins, the debris above them gives a sure indication of the period at which they fell into disuse. Pottery of the earliest Amorite period found in the debris above them—*e.g.*, at Gezer, Ophel and elsewhere, proves beyond doubt that these cup-hollows belong to the Neolithic age, and are, in many instances, the work of the cave-dwellers.

Similarly pottery and other remains of a later period indicate a date later than which they cannot have been made. Pottery of the cave-dwellers found beside them or in them

again as surely proves that they were in use in the cave-dweller period ; but there is nothing to prove how much earlier they may be. In fact, many of these cup-hollows may go back to the Palæolithic period, for all we know to the contrary. It is, indeed, very likely that many of them do.

One fact is absolutely certain. These cup-hollows in the rock surface were in use from the very earliest period, and continued to be made down to a late period, whatever may have been their purpose.

PURPOSE.—As to the purpose which they served, no one suggestion that has yet been made can possibly meet every case. Local tradition gives no assistance. The peasants say they were simply for collecting water, or they were presses for grapes or olives. That they were only for collecting water is unlikely. The amount of labour involved in making them with so poor results—for the largest series known could only collect a few gallons—seems utterly futile.

PRESSES.—That they were in some instances wine or olive presses is quite correct, I think. See, *e.g.*, the cup-hollow press from Zion (Ophel).

Where the cup-hollow lies in the bottom of a sunk space or trough in the rock, whether oval, rectangular, or circular, there is no doubt that the cup in this case is part of a grape or olive press and was intended to collect the juice. Many such instances have been found in districts where the olive-oil industry still flourishes.

RELIGIOUS.—That very many of them are associated with the religion of the people seems indisputable ; but there is the same doubt as to what part they played in religious ceremonial.

Some seem to have been intended for collecting liquid offerings, perhaps of wine or the blood of sacrifices. Those associated with the caves (16, III; 17, III; 17, IV; and 30, IV) at Gezer are not only connected together by cut channels, but in some cases the contents were led by a channel to flow down into the cave underneath.

The Cave 17, IV, at Gezer had a funnel 12 inches wide at its lower end, and 32 inches wide at the surface. This is too narrow for any person to enter by. A channel cut in the rock connected the funnel with a series of cup-hollows surrounded by stones set on edge in mud. Whatever was poured into these cups was clearly intended to flow into the cave by this channel and funnel. It cannot have been a rain-collecting

system, for the water would have run out of the cave by the eastern entrance. The cave was not a cistern. It must have been for fluids, blood or wine offerings to the god who dwelt in the cave, or to the shades of the dead.

The contents of this cave (G. 17, IV) all belonged to the period 1800-1400 B.C., when it had served as the cellar of a house; but beneath the debris of that period, a few *pig-bones* were found, pointing to the use of the pig for sacrifice.

These bones in the cave were carefully concentrated and covered with earth, which the occupiers of the later house left undisturbed.

Round the funnel opening are the series of cup-hollows surrounded by stones. They are arranged so as to drain into the funnel. These probably formed a subsidiary place of sacrifice. It is this association of cup-hollows with funnel, channel, and cave which here suggests that Cave 17, IV, and the cup-hollows were a high place, or played some part in the religion of the cave-dweller.

Cup-hollows are seldom found with such associations, and cannot therefore be regarded invariably as high places.

Those associated with the standing-stone in Cave 2, I, the crematorium cave of Gezer, are probably also part of a high place, and had a religious purpose.

These cup-hollows were apparently a cave-dweller expression of religion; and the standing-stone at Cave 2, I, which rested on 12 inches of debris, was a later Semitic addition and a religious symbol characteristic of the Amorite, not of the aboriginal cave-dweller.

In the south corridor of the southern temple of Thothmes III at Bethshan<sup>1</sup> have been found a sacred pillar, cone-shaped, for libation offerings; and, about 45 inches from it, a basalt libation bowl, sunk in the floor, which had doubtless been connected by a channel with the pillar-altar, and had collected the liquid offerings. The floor around both was paved with bricks. This is a clear instance of an artificial pillar and an artificial cup-hollow being used in a place where the depth of the debris made it impossible to use the rock surface; and this instance leaves no doubt in our minds that many of these cup-hollows were used on high places for this purpose of collecting liquid offerings to the deity whom the pillar symbolised, or who dwelt in the pillar.

<sup>1</sup> See Figs. pp. 110-111.

This instance belongs to the late sixteenth century B.C.

At the north end of the site of Megiddo, Schumacher found a rock surface with both round and oval cup-hollows. He regarded them as sockets for the poles of an artificial grove (Ashērah), or stands for pointed-base jars containing offerings. These were associated with a cave, as at Gezer (Cave 16, III) and at Ta'anach,<sup>1</sup> and perforations in the rock platform communicated with the cave.<sup>2</sup>

There is no doubt that a great number, if not most, of these cup-hollows were intended and used for liquid offerings (*cf.* 1 Sam. vii. 6: "They drew water and poured it out before the Lord"). In many parts of Palestine where they depend on the rainfall for water-supply, to pour out water before the Lord meant great sacrifice.

At Ta'anach, below the Ishtar-Washur fort of the fifteenth century B.C., were found two caves of a very much earlier date than the fort. One chamber was rectangular, and measured 22 by 13 feet. The other was elliptical, the axes measuring 21 and 11½ feet respectively. In front of these was an entrance court, 9 by 5½ feet, hewn in the rock, and leading into the caves, the floor of which was 3¼ feet below that of the court. A stairway of eight steps led down into this court. In the rock wall of this stairway a channel was cut, presumably to convey liquid offerings to the caves. The rock surface at the top of the steps had perhaps been an altar; but no cup-hollows were found. These cuttings are undoubtedly the work of the cave-dwellers; and if the presumption regarding the channel is correct, we have here an instance of liquid offerings to the shades being made without any cup-hollows being employed at all, a fact which need present no difficulty and cannot be regarded as disproving the theory that cup-hollows were very generally associated with such offerings.

Both of these caves at Ta'anach had, at a later date, been converted into a cistern.

Remote and isolated cup-hollows on hill-sides may have had a religious purpose, connected, perhaps, with the worship of the shades of the dead or of underground deities. It is pointed out, however, that Semitic eschatology does not favour this idea of worship of the shades of the dead, though it may quite well have been *the feature* of the cave-dweller's

<sup>1</sup> Schumacher, as above quoted.

<sup>2</sup> *Ta'anach*, p. 37 ff., Fig. 97; *cf.* p. 34, Fig. 31.

religion. That the cup-hollows are never found associated with burial-places is also against it, though the tombs may have disappeared. Macalister (*E.P.*, p. 191) seems to favour shade-worship as the religion of the cave-dweller. It is, however, a point which may never be satisfactorily decided.

There is a prehistoric cist burial at Sandahannah which has a slight bearing, perhaps, on the problem.<sup>1</sup> In this burial the chamber is built of comparatively small boulders, and measures  $6\frac{1}{2}$  feet north to south, 4 feet east to west, and is 24 inches deep. Two large stones (7 feet long and  $2\frac{1}{2}$  feet broad and 14 inches thick) span the chamber, leaving an open gap of 20 inches breadth between them. The east end was closed by a stone 20 inches broad, fitting this gap, and of the same thickness as the other two (14 inches). In the centre of this stone, which closes the east end, is a small cup-hollow measuring about  $\frac{4}{5}$  inch broad, and  $\frac{3}{8}$  inch deep. Macalister regards this as "the missing link connecting West Palestinian cup-marks with places of sepulture"; and there "can be no doubt that this cist is an ancient tomb."

It is quite possible, however, that the cup-hollow was on the rock before this part had been quarried away to be used in this cist burial: just as I found a great slab with a fine cup-hollow on it used as the side jamb of a door in a Herodian building at Jogbehah in Transjordan. The cup-hollow had been quarried from the rock with the slab, or the stone was taken from some other position.

The cup-mark on this stone of the cist is also so small that its presence may have no significance whatever. The evidence seems slender upon which to base a general conclusion.

STANDS FOR JARS, OR SOCKETS FOR POLES.—It has also been suggested that these cup-hollows were intended to support jars of fluid offerings with pointed bases, and also that they were meant to support wooden poles of artificial groves or Ashēroth.<sup>2</sup> The deep, cylindrical cup-hollows found at Tell-ej-Judeideh would seem to support this latter explanation; but these cylinder cups have been found nowhere else so far.

Neither of these explanations is applicable to every instance found, though both may be partly true. Both presuppose a

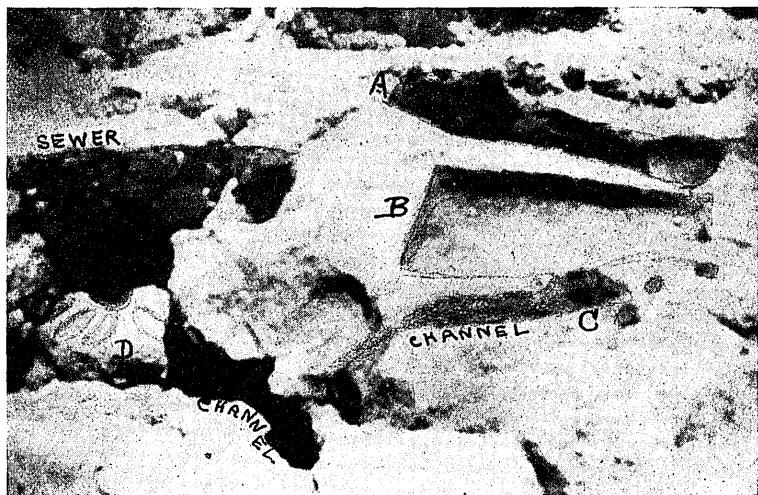
<sup>1</sup> *E.P.*, p. 192.

<sup>2</sup> Schumacher on Megiddo—*Mitteil. u. Nachricht des Deutsch. Pal. Ver.*, 1906, p. 12 f.

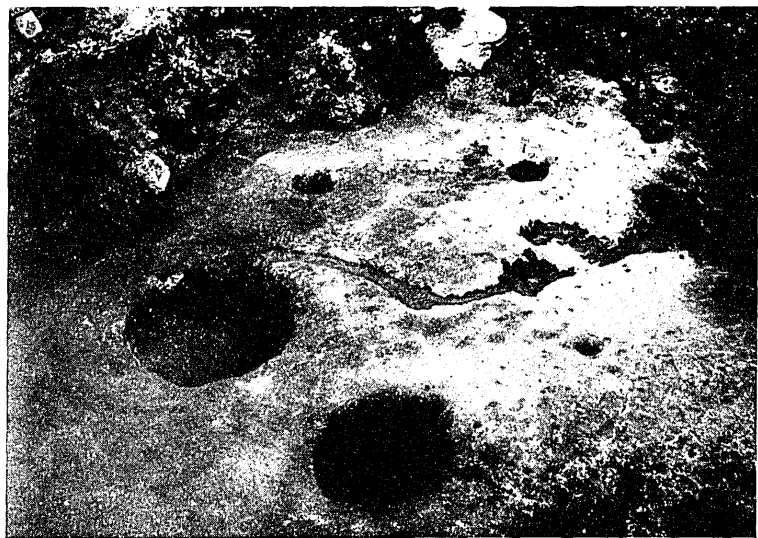


HIGH PLACE PRIOR TO 2000 B.C. (GEZER).  
CUP HOLLOW ASSOCIATED WITH CAVES.





ROCK-CUTTINGS F.7—OPHEL.



HIGH PLACE—JERUSALEM (OPHEL).

D ABOVE—SCOOP-SHAPE CUPS. ARAB PLASTER ON A.

facing p. 45.

religious significance for cup-hollows. There is the other possibility that many of these, like the artificial pottery sockets at Beisan, were meant to support artificial poles to which animals were tied for slaughter and for dressing afterwards.

ORNAMENTAL.—Cups associated with ornamental concentric circles, spirals or allied symbols, such as are found in Scandinavia, Britain and elsewhere, are not found in Palestine. Where the cups are connected by channels in Palestine, these channels are not ornamental, but utilitarian.

MINUTE CUPS.—The large groups of minute cups found—*e.g.*, at Tell-es-Safi<sup>1</sup>—connected together by tiny channels, and appearing like replicas of the larger systems, have so far not been explained. Some have suggested they were for some sort of game.

CUPS ON VERTICAL ROCK FACES.—The cups found on vertical faces of rock cliffs are equally difficult to explain. They correspond to cups found on standing-stones or crosses in our own country. It has been suggested that in them offerings of some thick substance, such as butter or melted fat, had been placed. Two of these were found at Tell-es-Safi.<sup>2</sup>

VAT AND CUP.—At Tell-es-Safi a vat 43 inches in diameter and 24 inches deep, connected by a channel with a cup 7 inches across and 7 inches deep, is a unique example of which there is no definite explanation. Probably it was used for refining liquid.

From Bethpelet (1928-29) Petrie records a fire-bowl, which seems to be sunk in the plastered floor of a room. He appears to regard this as simply a fireplace, and calls it a fire-bowl. It very much resembles the cup-hollows which we have been discussing, but if it is in the floor of a house it is probably a hollow sunk in the earth and plastered.

#### EXAMPLES OF CUP-HOLLOWS ASSOCIATED WITH CAVES, ETC.

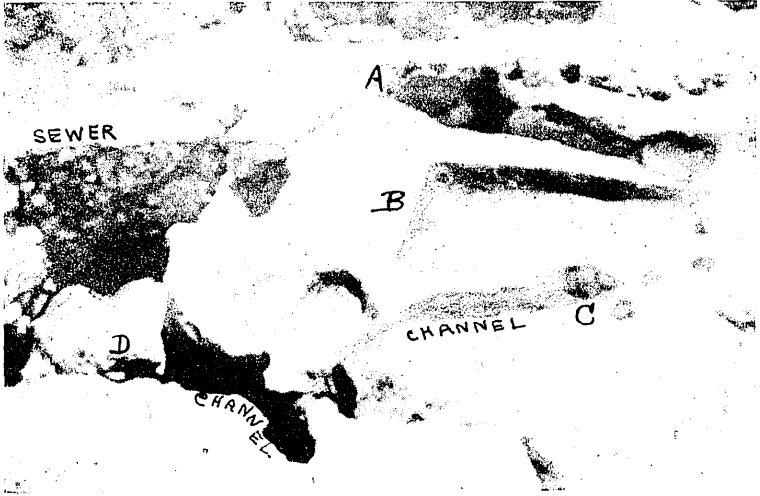
At Gezer, just north of the Maccabean cistern,<sup>3</sup> was uncovered a large irregular rock platform, about 86 by 76 feet, containing no fewer than eighty-three cup-hollows<sup>4</sup> of varying dimensions. The surface, in fact, looked like a series of knobs and hollows. The largest cup-hollow was 8 feet in diameter and 9 inches deep. It was partly covered by a later wall. Other two measured about 6 feet across, while two more

<sup>1</sup> *E.P.*, p. 194, Fig. 67.

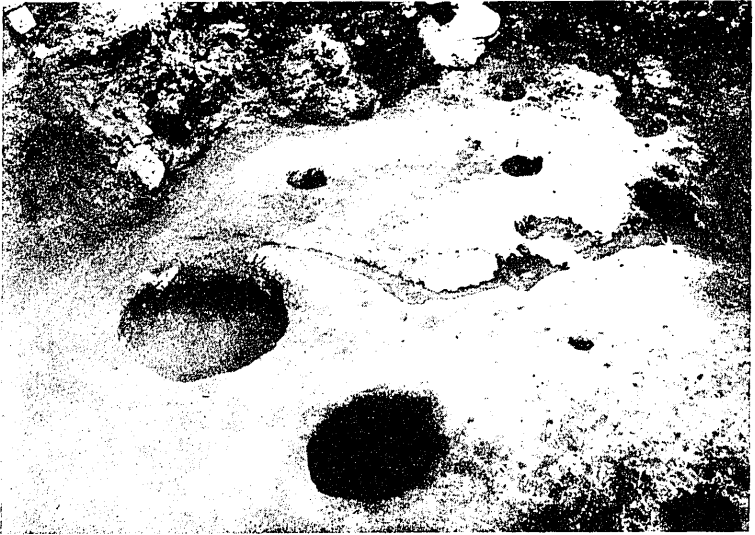
<sup>3</sup> See *E.P.*, p. 195, Fig. 69.

<sup>2</sup> *E.P.*, p. 195.

<sup>4</sup> *G. I.*, 100 ff.



ROCK CUTTINGS AT OPHEL.



HIGH PLACE, JERUSALEM (OPHEL).

Scale of 100 Yards (100 Meters) is shown in the upper right corner.

Arch. Ep. 15.

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<sup>3</sup> See *E.P.*, p. 195, Fig. 69.

<sup>2</sup> *E.P.*, p. 195.

<sup>4</sup> *G.* I, 100 ff.

measured 35 inches across, and were partly enclosed with stones set on edge in mud. The other seventy-eight are all small, averaging 6 to 8 inches across and 6 inches deep.

All the large and some small ones are circular. Most of the small ones are *oval* or *rectangular*. The oval cups have the long sides *vertical*, but the short sides curve gently towards the centre, forming thus a segment of a cylinder or rounded scoop-hole, with vertical sides, in shape similar to the radiating cup-hollows which I found on Ophel (Field 7). Two have a deeper hollow at one end of the cup as if for collecting sediment, and there were two sets of four joined so as to form composite cups.

DATE.—In the debris above this surface the pottery was “Early Semitic”—*i.e.*, prior to 2000 B.C. These cuttings therefore date prior to 2000 B.C.

### THE CAVES : CAVE 16, III

Underneath this platform were three caves numbered 16, III ; 17, III, and 17, IV.<sup>1</sup> Cave 16, III, is a chamber 36 by 38 feet, cut into two by a rough ledge left to support the roof. A subordinate bay had been cut on the west side.

The roof is 11½ feet high, the highest found at Gezer.

At the south-east corner a rock-cut passage led to the bottom of a stairway of eleven steps cut in the rock. At the top this stair has a bend forming a right angle, which is quite unique. This formed the entrance, and the steps are of the usual form found in cave-dwellings.

Originally the floor had been rubbed smooth all over, but is now rough and hollowed, *cut perhaps by treasure-hunters*. There is also a large oval pit, which had been cut for water at a later date probably, as its position indicates. The tool-marks are very clearly defined on the soft compact chalk of the walls, and wooden or flint chisels were used, as the grooves, ridges, and irregularities on the edge of the tool indicate. These marks are the same as those found on the great water-passage at Gezer.

There is a striking similarity between the plan of this cave and the much later cave at Tell-Sandahannah,<sup>2</sup> which is a rectangular chamber, similarly divided into bays.

Cave 16, III, was thus *an artificial cave*, excavated in soft rock,

<sup>1</sup> G., Pl. 27.

<sup>2</sup> E.P., pp. 248-250.

with flint chisels whose edges were broken, and made for some special purpose.

The later built wall separated the cave from 17, III. The two caves had probably formed one cave originally.

*Cave 17, III*, measured about 14 by 9 feet. It is only partly roofed by the rock-cut platform, and was lined on the north and east sides by crude masonry. The east end was open to the sky. There were two broad, shallow cup-hollows in the floor, like saucers.

*Note*.—If these two caves were originally one, and 17, III, was open to the sky, the rock-cut stair-entrance to 16, III, seems quite unnecessary.

#### CAVE 17, IV (G. I, 102 ; II, 378, Pl. 27)

Cave 17, IV measures 32 feet north-west to south-east by 20 feet and 8 feet high.

**ENTRANCES**.—There are two entrances—one on the east side by a high, narrow doorway, with a down-sloping, rock-cut passage leading to it. The south side of the doorway is built of rubble and mud. The other entrance, on the west side, is a low, narrow creep-passage, under a projecting shelf of the rock platform. This passage opens into the cave just under the roof. It is just wide enough to get through, and implies a drop of about 6 feet to the floor.

**APSE**.—At the north end is an “apsidal projection” at 2 feet above the floor level of the cave, stepped upward.

**FUNNEL**.—In the roof of this apse is an opening 12 inches wide. This is the lower end of a funnel which passes through the 42 inches of channel roof and widens to 32 inches at the surface. Into this funnel a channel cut in the rock platform, 54 inches long and 14 inches broad, leads from the north-west side, and some of the cup-hollows near *seem* connected with it. This series of cups and caves associated must have been a high place of the cave-dweller period.

#### GEZER (CAVE 30, IV)

##### CAVE AND CUP-HOLLOW ASSOCIATED

This cave is too important to be passed over in any account of Neolithic remains in Palestine. Thirty-six feet of debris lay above it. These 36 feet represented eight different strata. Three of these date after the destruction of the inner wall of

Gezer in 1450 B.C. Three represent the period between 1450 and the building of that wall about 2500, roughly a period of 1,000 years. The two lowest strata antedate that wall. If we assume that each stratum represents a period of 350 years, as the three strata above them indicate, the latest occupation of this cave by cave-dwellers must date sometime prior to 3000 B.C.

Near the entrance there are three large hollows or vats excavated in the rock surface, two (A and B) on the south-west, and one (C) on the north-east side of it. Of these, one (A) is unfinished. It is 7 feet in diameter and 18 inches deep. The other, close beside it (B), is 39 inches in diameter and 24 inches deep. Its sides are vertical and its base rounded. The third (C), a circular hollow, is 6 feet in diameter and 12 inches at its deepest.

In A and C, where the rock fails on the south side, masonry is substituted. C has also been cracked right across, probably by an earthquake. Macalister thinks C was a fruit-press of the cave-dweller period.

A has a wall 3 feet high built round it, which passed over and conceals part of B. A rude wall runs round the east side of C. Both walls are of later date. There is no connecting channel between them. Scattered around the hollow (C) are thirteen cup-hollows (D-D). Three of these (x) are shallow *circular* bowls, broader than deep. Four (y) are *circular* and deeper than broad. The other six are *oval*. Fifteen feet south of the entrance are other two of the middle type (y). The largest is 24 inches in diameter and 9 inches deep. The others average 12 to 18 inches across. The deepest is 14 inches.

The large vats (A and B) at the door of the cave were probably used as water pots—it may be for watering animals, or simply that the water was brought from the nearest supply in skin panniers and emptied in them. In the rain season they would collect rain as it fell. In later times it was quite usual to make such vats simply by sinking a hole in the soil beside the door of a house and plastering it with hard-baked plaster. We found two such on Ophel, close to the door of a Byzantine house, and quite close to the mouth of their cistern. They were not rain-collecting filter pots, as there was no inlet from them to the cistern.

The vat C may have been a fruit-press. All three may have been used as such when necessary, or we may regard the whole series as having a religious purpose; but they must all have

been full of water in the rain season, and so could not fail to be of use for water as well.

It appears by no means certain, however, though likely, that these hollows are contemporaneous with, or the work of, the early cave-dwellers, for the cave seems to have been open and used as cellars during the Egyptian occupation (1450 B.C.), and the walls round A and C are admittedly later additions. Macalister is not quite clear on this point. That the maker of the cave was quite capable of making the hollows is, however, indisputable.

The entrance to the cave is a long, narrow opening, almost 15 feet by the plan, evidently a tunnel, and on the north side, where the rock is not high enough, rude masonry supplies the deficiency. It slopes inwards and ends in steps rudely cut in the rock, mere foot-holds. On each side at the bottom of these steps is a deep vat in the floor of the cave, the eastern one 3 feet across and 22 inches deep. This one (e) is *partly cut out of the entrance stair*. The western one (f) is in an apse, some 5 feet from the stair, and is connected with the stair by a channel cut in the rock. It is 47 inches across and 3 feet deep.

These vats were perhaps intended to collect rain-water allowed to enter by the stair (though they could not prevent the flooding of the cave), which confirms my suggestion regarding the vats (A and B) at the entrance.

The cave is oval, but has a number of apses or unpartitioned rooms off it, like Chamber 10 of Cave 28, II.

One apse (g) has its floor 10 inches above the cave floor level, with three cup-hollows, 10-13 inches wide, and five smaller cups, as shown on the plan. Another apse (k) has its floor 10 inches below the cave floor level, and three cups cut in it. There is one cup cut almost exactly in the centre of the cave floor area, and seven other cups near apses (g) and (k).

Through a projecting ledge of rock (l) on the wall of the cave, not far from the door, there is a hole cut, as if for tethering animals.

The length of the cave is only  $16\frac{1}{2}$  feet, and the height about  $5\frac{1}{2}$  feet.

#### THE GRAFFITI CAVE: CAVE 30, IV—WAS IT A DWELLING?

Macalister says nothing of pottery or other relics found in this cave. I assume, therefore, that none were found, nor any indication of its being constantly inhabited, except the graffiti



on the wall, described elsewhere. It is an open question, therefore, whether this was a dwelling at all, and if it was not, rather a cave connected with some cult, a sort of sacrificial cave (*cf.* Cave 2, I).

The cave is not of great size to accommodate a family with their beasts, nor is it an easy one for cattle to enter. That the hole in the rock was "for tethering cattle" seems doubtful. It might serve for one or two. It might, on the other hand, have been used for tying up an animal to be slaughtered in sacrifice. Our knowledge, however, of Canaanite cults is still so meagre, that it is impossible to speak with certainty.

We may, however, compare with this the two caves found beside the governor's residence at Ta'anach, which have a rock-hewn chamber in front of them, communicating by spiral stairs as well as by a channel beside the stairs, with an altar on the surface hewn out of the rock. This system at Ta'anach seems intended for sacrifices to the dead or to the spirits of the under-world, the sacrifices being slain on the altar, the channel being intended to lead the blood into the caves, the abode of these spirits. Driver compares with this Cave 2, I, the crematorium, at Gezer.

Schumacher found a similar system at Megiddo (*Tell-el-Mutesellim*, p. 156), the rock-surface altar being connected with the cave underneath by holes in the roof.

At Tell-ej-Judeideh<sup>1</sup> a rock platform, 160 by 120 feet, was found containing over 100 cup-hollows of varying size. Some were isolated, some grouped, and some connected by channels.

One slab of surface, for instance, contained twenty-five cup-hollows, one of which stood isolated, while the rest were close together. This little slab, with its group, may well have been such an altar as is referred to in Judges vi. 20; xiii. 19—Gideon and Manoah. In this series the shape is unique. The cups are mostly deep, narrow cylinders, as if for supporting poles.

No burials of sacrifices, human or otherwise, were found near, however, nor any other detail, such as caves or standing-stones, that would definitely associate them with a religious purpose.

At Tell-Zakariyeh and Tell-es-Safi similar smaller areas were found. These may also have had a religious purpose, but no evidence was found to establish this. See also Ta'anach, p. 34, Fig. 31.

<sup>1</sup> *E.P.*, p. 195, Pl. 89.

## HIGH PLACE AT JERUSALEM

CUP-HOLLOWS AND TROUGH.—On Ophel, in 1923, we found a fine series of cup-hollows on a rock platform in Field 5.<sup>1</sup>

At the north edge of this platform was the finely rounded trench or trough about 8 feet in breadth and over 6 feet in depth, cut in the rock, described under Amorite Fortifications. Two sections of rock, measuring 2 feet broad and 2 feet deep, were left uncut in the bottom of the trench at a distance of about 18-20 feet apart. These form a trough about 18 feet long, 5 feet wide, and 2 feet deep, at the eastern end of the trench, while the trench itself continued westward for some short distance. It was presumed that the trench continued eastward also, but there is no evidence for this, as we did not, or could not, follow it up. Macalister has described these uncut sections as "gangways left to facilitate traffic" across the trench while the trench itself he regards as part of a very early fortification. We could never see the utility of these gangways, as they seem so futile and unnecessary in the case of a trench that anyone may leap across with ease.

ALTAR (?).—Just over the eastern "gangway" rises a roughly shaped projection of rock which I suggested had been an altar. On this ledge there were two or three roughly cut foot-grips or steps on which an officiating priest might have stood with some difficulty and risk, having his back to the trough, and facing towards the rock platform with its cup-hollows.

That the trench may have been used as a sort of moat between two walls, such as we find in the west fort of Megiddo, is quite possible; but that this trough with its two "gangways" was part of the system of altar and cup-hollows, part of a high place of sacrifice, I have always felt convinced. The built wall crossing the western end of the trench (*Ann.*, IV, p. 31, Fig. 25) is simply a rude foundation wall sunk at a later date.<sup>1</sup>

This trough was filled with debris which contained countless sherds "of the Middle and Late Bronze Ages" (2000-1200 B.C.). Among these sherds were many Cypriote fragments, especially of the well-known crooked-neck jugs or "bil-bils." These crooked-neck jugs belong to the XVIII Dynasty period of Egypt, and bring the latest date of use down to the fifteenth

<sup>1</sup> See *P.E.F. Ann.* IV, p. 31 *seq.*

century B.C., at least. Far more important, however, is the fact that the debris in the trench contained a great quantity of bones of domestic animals. These may have been the bones of animals offered in sacrifice and afterwards buried in the trench; or, it may be, the trough had originally played some part in the sacrifices of this high place, and had afterwards been filled up and defiled by rubbish brought from another source when the high place was condemned.

It seems to me that, whatever was the later use of the complete trench, the trough section of it behind the altar originally formed part of this high place for sacrifice and liquid offerings; and the trench may have been used as a moat by the Amorites. It had remained open down to at least 1500 B.C., if not later.

South of the "altar" and on the same level as its surface is the smooth platform of rock, about 28 by 20 feet, containing a series of fifteen or sixteen cup-hollows, of which the two side by side at the extreme south end are by far the largest. These two are finely cut circular hollows. The eastern one measured 27 inches across the mouth and 36 inches deep. The other measured 42 inches across and 30 inches deep. The first one showed traces of fire.

Of the others, some show a depth much greater than the diameter. One is 11 inches across and 21 inches deep. Another is 13 inches wide and 24 inches deep. There are also a few saucer-shaped hollows varying in size from 4 to 8 inches diameter and 2 to 6 inches deep.

A *channel*, whose meandering course seems chosen in order to make use of some natural depressions, ran across the rock surface from the edge of the largest cup-hollow (42 by 30 inches) to the cup-hollow just south of the "altar." The single course of rude stones found just south of the two largest cup-hollows may be all that remained of an original wall of enclosure (for Plan see *Ann.* IV, Pl. 4).

There is no doubt that this is a Canaanite high place, and was in use probably from cave-dweller times down to the sixteenth or fifteenth century B.C. It is quite possible that it remained uncovered even in Hebrew times, and was desecrated by them.

Only a few yards south of this in Field 7 I found an interesting series of cuttings in the rock surface. One of these was a rounded trench or bath-shaped cutting closely resembling the trough above described (A in photo). It was 10 feet long,

about 5 feet broad, and 4 feet deep, which Macalister admits is a very unusual size for a wine-press. At the south end a hollowed ledge or shelf, 3 feet broad, was left uncut, 18 inches above the floor of the trench. Just south of it and not connected was another vat, 3 feet long by  $2\frac{1}{2}$  wide by 2 feet deep.

A few feet to the west of the trench was a shallow rhombus-shaped cutting (B on photo),  $8\frac{1}{2}$  feet long, 14 inches deep, 6 feet broad at the north end, and 4 feet broad at the south end. From about the centre of its west side, a very roughly cut channel led vertically down the face of the rock platform into another wider and deeper channel, which disappeared under the modern sewage drain. It probably led to the funnel entrance of the large cave, and this cave may have been originally a sacrificial cave, as I suggested in my report when I discovered it. The channel is cut to the very bottom of the rock-cut basin. Had this been an olive-press, I cannot see how the channel could fail to get blocked, nor does it seem to lead to any point where the juice could be collected and put in jars. Three small cup-hollows were associated with this cutting, but entirely disconnected.

At about 8 feet lower level by the side of the deeper channel referred to, and east of it, was a series of eight shallow scoop-shaped cup-hollows, radiating round a circular, deeper hollow. Half of this cutting was also covered by the sewage drain. Under this drain, also, must lie the orifice of the funnel of the large cave described above,<sup>1</sup> but we could not undercut the floor of the sewer to find it.

There is not the slightest doubt, however, that these cuttings formed part, and were a continuation, of the series of cup-hollows which we found at the east end of the same field,<sup>2</sup> and which had to be buried before I could excavate the western half of the field; and I am quite convinced that the whole series formed another Canaanite high place, and was connected with the large cave, which I cleared, by the funnel entrance.

Of the cup-hollows found by him at the east end of this high place, one is interesting. It is a cup,  $7\frac{1}{2}$  inches in diameter and 9 inches deep, cut in the centre of a larger basin 19 inches wide and 9 inches deep. Thus it looks like a cup with a ring round it; probably the makers originally intended to continue the large basin to the full depth, and desisted for some reason. The form is unusual.

<sup>1</sup> See also *P.E.F. Ann.* IV, p. 21.

<sup>2</sup> *Ibid.*, pp. 16-20.

In the arrangement of cup-hollows on rock surfaces there is no evidence of any definite order being aimed at, nor do the measurements give any clue to the design. Their position appears to be casual, and their size and shape often accidental.

The interesting fact about these rock cuttings on Ophel is that here, within a few yards of each other, we seem to have two Canaanite high places, one of which appears to have been connected with a large underground cave.

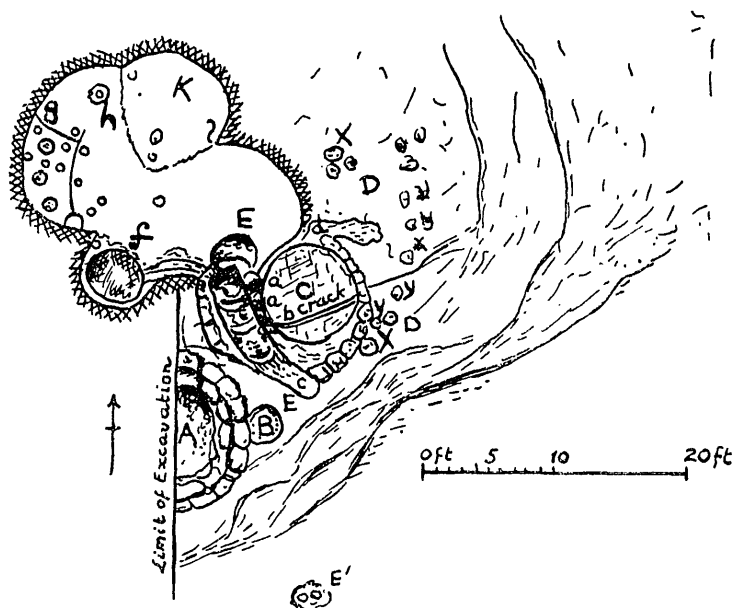


FIG. 4.—PLAN OF CAVE 30, IV, CONTAINING ROCK SCRIBINGS.

It may be that they were intended for two different cults, which is very likely. One may have been associated with the worship of the shades of the dead, or the deities underground. The other may have been used in sun-worship.<sup>1</sup> They were in different fields (7 and 9), and we could not leave both open at once, but they seemed to occupy the same rock platform, and the whole series may have formed only one high place.

Cup-hollows are frequently found cut in massebas or standing-stones, as at Ta'anach, Jericho, and Megiddo.

<sup>1</sup> I have suggested that the scoop-hollows radiating round the deeper circular hollow represent the sun and its rays, and that here we have an early evidence of sun-worship.

## II. STANDING-STONES WITH CUP-HOLLOWS

## GENERAL

The standing-stone was certainly a cult symbol among the Amorites. Perhaps the earliest example is that found near the supposed crematorium cave of Gezer. The stone, however, seems to have been not the god himself, but merely the visible symbol, a dwelling of the god. No instance has been found which would connect it with the cave-dweller religion.

Religious significance seems to have been attached to it also by the Hebrews. In the Old Testament we find a "stone set up" to commemorate some important event or experience, just as we might build a church to commemorate some great deliverance. Thus, Joshua (iv. 2-8, 20) set up a circle of stones in the river-bed, and one on the bank of Jordan, to commemorate the safe crossing of the Israelites; and the spot became known as Gilgal, "the Circle of Stones." It is very significant that these stones were arranged in a circle, and there is undoubtedly here a trace of the sun-worship of the Amorites.

Similarly, after his dream, Jacob set up a stone "pillar," smeared it with oil, and called it "Beth-el," implying that the stone itself was the dwelling of "El" or marked a place where "El" could be met.

Again, before parting with Laban (Gen. xxxi. 45-52), Jacob set up a pillar, and added a heap of stones or "cairn" to be a witness to their agreement. In this case the "cairn" gives the name to the place, which becomes known as Galeed, the "Heap of Witness."

When he buried Rachel (Gen. xxxv. 20) he set a pillar on her grave, which was a known landmark in later times, as 1 Samuel x. 2 indicates. In Judges ix. 6 it was by the plain (or oak) of the pillar in Shechem that Abimelech was made king, the pillar having sacred significance.

Boundary stones seem also to have been invested with something of the same inviolate sanctity; and we occasionally find instances of ancient standing-stones being removed from their original associations and used as boundary stones (Deut. xxvii. 17; Job xxiv. 2; Prov. xxii. 28, etc.).

In many standing-stones, as *e.g.* at Ta'anach,<sup>1</sup> cup-hollows are cut on the vertical face as well as on the top. Those on

<sup>1</sup> *Ta'anach*, pp. 68, 69, 104.

the face may have been for oil or blood smearing, and those on the top for libations. These cuttings would suggest that the stone was regarded merely as a medium or symbol, not as the god himself, as they would "scarcely cut hollows in the stone, if the stone was itself the god." Isaiah (xliv. 9-17), however, takes a different view, and ridicules idolaters who make their own gods, clearly insinuating that the "image" is to them "the god."

That these standing-stones were associated with the worship of a deity is evidenced by the Phœnician stele on which a person is depicted in the attitude of worship before three standing-stones.<sup>1</sup>

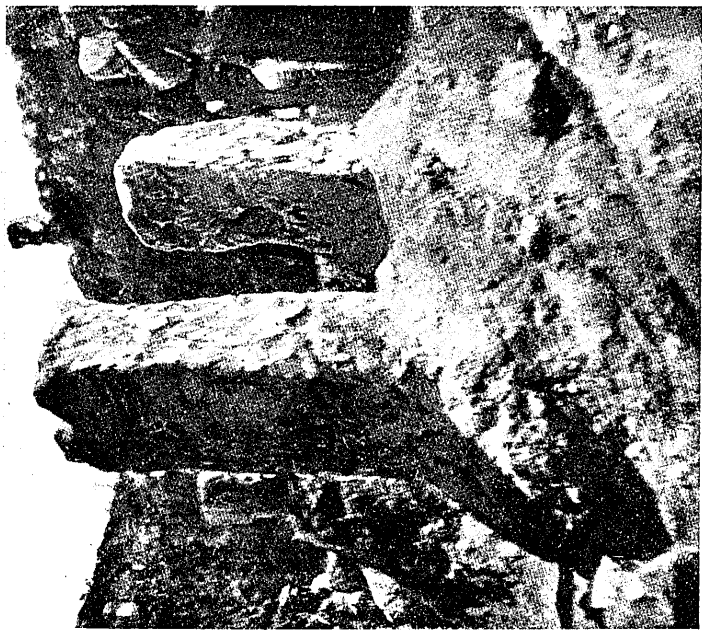
#### TA'ANACH—HIGH PLACE: CANAANITE AND HEBREW

Two standing-stones associated with a stone trough were found at Ta'anach within an enclosing wall. The larger ( $4\frac{1}{2}$  feet high) had a cup-hollow, 15 inches broad and 9 inches deep, on the top, and the other had a cup half-way up the side facing the larger one. This had been a temple or enclosed high place, and as no bones were found nor any trace of buried sacrificial animals near, it seems to have been not a place of sacrifice, but a place for liquid offerings. This is confirmed by the fact that vessels of basalt and pottery were found in great quantities within the enclosure. This does not link the cup-hollows with the burial of the dead, but it certainly points to their being used for liquid offerings.

This small high place enclosure was in use during the period 1500-900 B.C. That is to say, it was originally an Amorite high place, dating at least as early as 1500 B.C., and was later adopted and used by the Hebrews. The pottery and objects found prove this. It is clear from this example that among the Amorites cup-hollows were associated with standing-stones and retained their original significance.

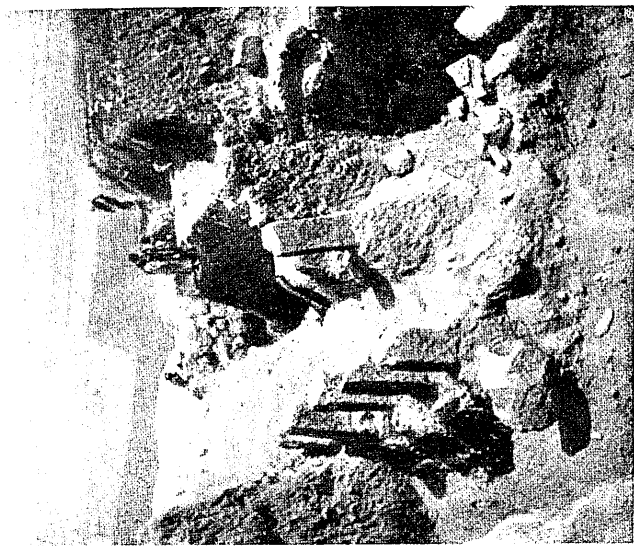
The Hebrews certainly appear to have associated the same ideas with standing-stones as the Amorites did, thus showing that they had at least adopted the symbolism of the Canaanite religion, though their religion was different. Nor is there anything surprising in this. The Amorite religion may easily have been a tradition among the Hebrews, especially when we consider that Abraham, the traditional founder of the Hebrew race, may himself have been an Amorite.

<sup>1</sup> *Corpus Inscr. Semit.*, L, 135.



TWO STANDING-STONES-TAANACH.

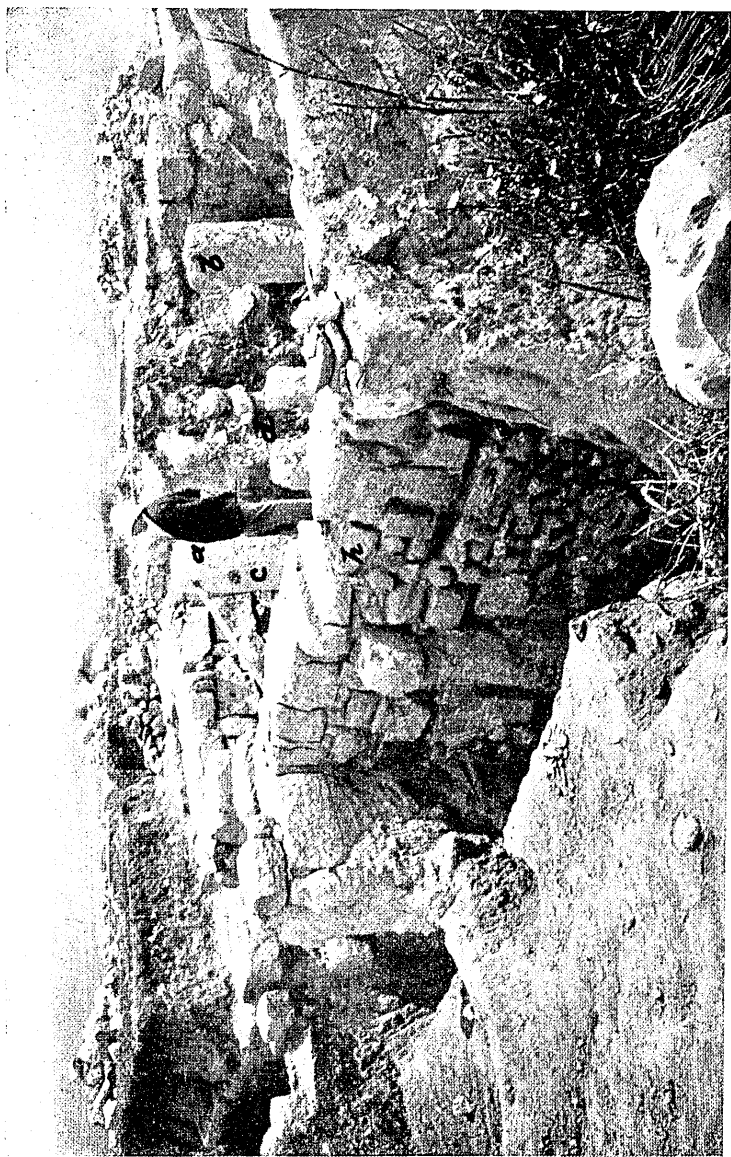
FROM TELL TA'ANNEK PP. 69 AND 18.



DOUBLE ROW OF DO-TAANACH.

facing p. 56.





STANDING-STONES IN TEMPLE OF MEGIDDO.

(TELL EL MUTESILLIM P. 110.)

That the pillar or *masseba* (standing-stone) had been adopted and accepted as a feature of the worship of Jehovah is proved by Isaiah xix. 19 and Hosea iii. 4. Isaiah says an altar and a pillar will be erected to Yahveh on the borders of Egypt; and Hosea prophesies a time when Israel shall be "without a sacrifice (*i.e.*, an altar), without an image or house of idols, without a pillar, without an ephod, and without teraphim," thus implying that in their time these were all recognised emblems in Hebrew worship, though it maybe that they worshipped the Canaanite deities, alongside of Jehovah.

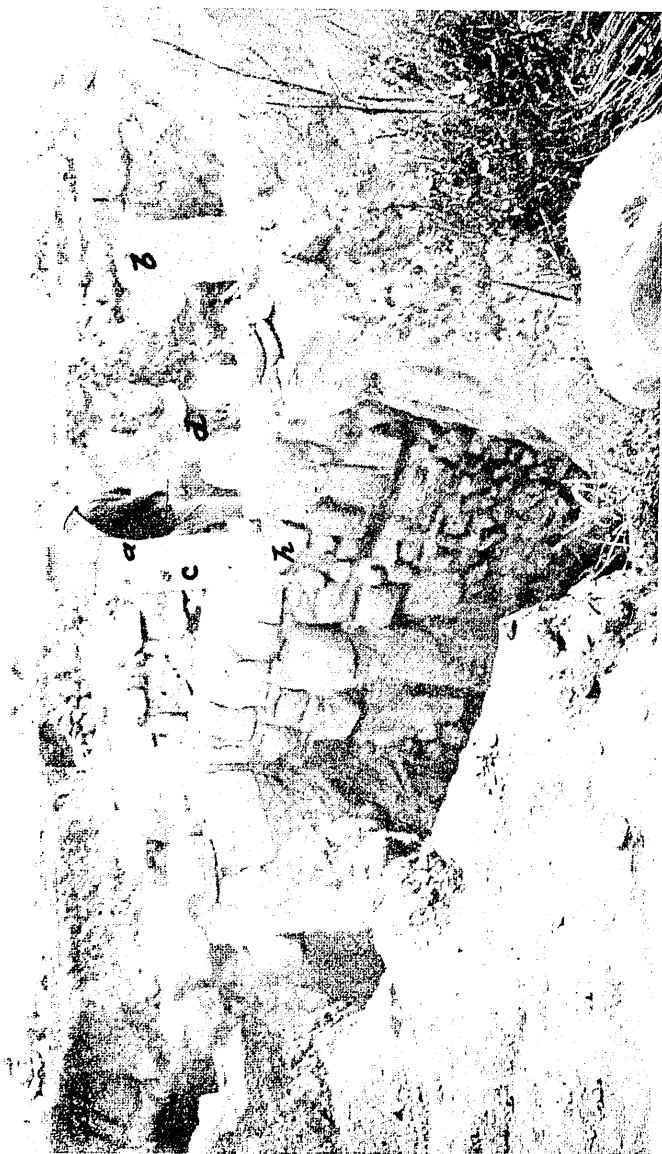
The prophets thus appear to have advocated the same policy as the early Christians did. They adopted the rites and emblems of the pagan religion around them, and consecrated them to the religion of Jehovah: unless in such passages they were really denouncing the use of Canaanite symbols in Yahveh worship. The symbols were certainly used by the Hebrews.

That the Hebrews, however, adopted the religion itself as well, is only too well established in the Old Testament: Deuteronomy (xvi. 21-22) forbids the use of Ashēroth or groves and standing-stones in the worship of Jehovah, evidently because the religion was adopted with the symbols. In his religious reform (2 Kings xviii. 4) Hezekiah removed the *high places*, broke the *images*, cut down the *groves*, and broke in pieces the *brazen serpent*, which he described as a mere piece of brass; and here the word used in the Hebrew for "images" is *mazzeboth*, which really means "standing-stones" or "pillars."<sup>1</sup> The passage leaves no doubt, therefore, that the pillar had taken the place of God Himself in Hezekiah's opinion.

#### JERICHO (*Plate 3b*)

Under the inner brick wall of the city of Jericho, which dates prior to 2000 B.C., was found an earlier wall, the west side of which included three huge monoliths. One lay on its side, and has on its surface a large number of small, round hollows of very little depth, which may simply be water-worn, or they may be cups begun and abandoned. The other two stand on end side by side. The centre one has two cup-hollows on the smooth face and near the base. The stone has been cut away, round the rims of these cups, so as to make the rims project. The cups are connected by a channel, and another

<sup>1</sup> So also Hos. iii. 4.



STANDING STONES IN TEMPLE OF MEGALITHS.  
 (SEE P. 100, PLATE 1, 1960)

That the pillar or *masseba* (standing-stone) had been adopted and accepted as a feature of the worship of Jehovah is proved by Isaiah xix. 19 and Hosea iii. 4. Isaiah says an altar and a pillar will be erected to Yahveh on the borders of Egypt; and Hosea prophesies a time when Israel shall be "without a sacrifice (*i.e.*, an altar), without an image or house of idols, without a pillar, without an ephod, and without teraphim," thus implying that in their time these were all recognised emblems in Hebrew worship, though it maybe that they worshipped the Canaanite deities, alongside of Jehovah.

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<sup>1</sup> So also Hos. iii. 4.

channel connects the upper cup with the edge of the stone. The third stone resembles the middle one, but is not so badly worn on top. It has no cup-hollows.

These three monoliths probably stood near their original position, and had later been incorporated with the wall. The rest of the wall consists of four courses of rough blocks rising to 26 feet in height. The monoliths are of almost equal length, and the breadth is also much the same in each. If they originally formed a dolmen, the middle stone with the two cup-hollows probably formed the roof; and this would give us a link to connect the use of cup-hollows with burials. It may be, however, that they are part of a Canaanite high place built into a later building.

### MEGIDDO : THREE STANDING-STONES WITH CUP-HOLLOWS

TEMPLE OF THE HEBREW PERIOD.—At Megiddo there was found a series of buildings, which covered an area of 228 square feet north to south, and 147 feet east to west, and part of which is regarded as a temple.

Essentially, the temple consists of a rectangular room about 30 by 13 feet,<sup>1</sup> divided into two equal parts by a partition. The floor is paved with cobble-stones, resting on debris. The outer walls, of well-dressed and well-laid blocks, are 39 inches thick. The partition wall consists of two large and one small monolith pillar connected by masonry of smaller blocks. The two larger measure 7 feet 2 inches by 18 inches across, and about 7 feet by 16 inches across. They stand on a bed of field stones 6 inches below the level of the chamber floor. On the west face of the northern monolith is a small cup-hollow 8 inches in diameter and 6½ inches deep, while on the top of this one is an oval hollow 8 inches long, 4 inches broad, and 2 inches deep, resembling the radiating oval hollows which I found on Ophel Field 7. These two monoliths are 11 feet apart.

This partition wall stops short of the side walls by 3½ feet at each side, these gaps serving as doors to the inner room,<sup>2</sup> and has a pillar at each end. The pillar at the southern end consists of the third monolith (about 4 feet by 28 inches broad, and 10 inches thick) with two large blocks of masonry placed above it. This monolith has a hollow in it which points to its

<sup>1</sup> Thirteen feet is a common width in houses, and seems to be the maximum span of the wooden beams used.

<sup>2</sup> *T.M.*, p. 110 f.

having been used as an olive-press. The pillar terminating the partition wall at the northern end consists of five large blocks of masonry.

In the centre of the 11-foot space between the two large monoliths is a door about 2 feet wide with side pillars resting on a stone foundation. In the southern side-pillar is a slot for receiving the bolt of a door.

ALTAR.—Near the door is a large stone slab, “resting on” or fixed into the partition wall. This may be an altar or table. In front of this is a platform 32 inches below the surface of the table or altar, and on this platform rests a stone (28 inches long, 19 inches broad, and 8 inches high) in which is a circular hollow 9 inches across and 6 inches deep, very carefully cut. A step 6 inches high leads from the platform to the floor. A layer of burned debris,  $4\frac{1}{2}$  inches thick, lying round the cup-stone, contained remains of animals.

The outer walls of the temple are of the same masonry as the palace of Megiddo,<sup>1</sup> in a room of which were found other six standing-stones,<sup>2</sup> and a stone with a cup-hollow 9 inches in diameter and 6 inches deep, near to which was an *incense-altar*<sup>3</sup> with a bed of ashes, potsherds, and earth around it. The masonry consists of well-dressed stones laid in an alternation of two headers followed by three stretchers. The headers are exactly the thickness of the wall in length—viz., 39 to 43 inches—and the three stretchers together cover the same breadth.

These walls, as found, were 8 feet high, but originally may have stood much higher.

It has been suggested that the three monoliths in the early wall at *Jericho* had originally been massebas, or pillars of a high place, and were later used for building purposes. This seems to be correct, but cannot be definitely affirmed. In the temple of Megiddo, however, the evidence is much clearer. Here it appears that a temple had been built at a later date on ground that had already been consecrated in Canaanite times to religious purposes. Instead of removing the standing-stones, or emblems of Canaanite worship, the later builders (the Hebrews) had incorporated them, building them into the partition wall of their temple. This again points to the policy of *placating the Canaanites around them by adopting the symbols of their religion*, or that of *incorporating Canaanite symbols of worship and consecrating them to the worship of Jehovah*. We have

<sup>1</sup> T.M., p. 91 ff.

<sup>2</sup> T.M., p. 125 ff.

<sup>3</sup> T.M., pp. 126-127.

already pointed out several instances indicating such a policy. The other alternative is that here are evidences that the Hebrews adopted the Canaanite religion itself.

It appears that here the Hebrews chose a spot already known to be a Canaanite high place and therefore consecrated. They used the ground with its traditional sanctity and built their temple on it; but the Canaanite symbols the standing-stones, were used merely as masonry, not as religious emblems.

Here also we find an altar standing 32 inches above an artificial platform. This altar is a stone slab fixed into the partition wall, and the altar is in the outer court—*i.e.*, outside of the Adytum or Holy of holies.

In this platform is an artificial cup-hollow cut in a stone slab. This hollow is obviously associated with the altar and played a part in the religious ceremonial. The evidence here is, therefore, as conclusive as at Bethshan, where the cup-hollow is an artificial bowl sunk in the floor; and both instances prove that the cup-hollow played a part in the religious ceremonial of both Canaanite and Hebrew.

### MEGIDDO : THE STANDING-STONES IN THE GREAT COURT<sup>1</sup>

In a room of the sixth stratum, outside the east wall of the great palace courtyard, six standing-stones were found. This room measures about 29 by 19½ feet. The stones are set on a built foundation which rests on a bed of clay. Three stand in line at the north end of the room, the central one having a mason's mark. The other three seem totally unconnected with these. Two of them are built into the east wall, and the third stands almost in the centre of the room, some 9 feet south of the central stone of the north row of three. All these three have mason's marks.

A stone, with a round hollow in it, and an incense-altar were found associated with these standing-stones.

OVEN.—On the south side of the room is an oven 29 inches in diameter and 21 inches deep. The lower part is built of stones. The upper or oven proper is a double casing of terra-cotta, thickened and strengthened by another covering of mud-mortar mixed with sherds. The whole is, of course, baked hard as pottery. The oven belongs to the period of the house.

<sup>1</sup> For illustrations, see *Tell-el-Mutesellim*, pp. 126-127.

These standing-stones are part of a Canaanite high place, incorporated in the building, though why four of them should be left in the floor space of the room we cannot explain, unless this was one of the Hebrew chambers of idolatry referred to in such a passage as Ezekiel viii. 10-12. This latter supposition would still imply that it was a Canaanite high place adopted by the Hebrews : since if they erected the stones themselves, the Hebrews would not have built two of them into the wall. The chamber referred to in Ezekiel was entered from the temple court by a secret door, hidden in a hole of the wall. Very probably this chamber had a similar connection with the great court at Megiddo.

#### THE HIGH PLACE OF GATH

*Tell-es-Safi ; Amorite High Place and Temple of the III Bronze Age, 1600-1200 B.C. (2 Kings xviii. 4 ; 2 Chron. xxxiv. 3).*

On the north-east plateau in a clearance to the rock surface the following different strata were found at Tell-es-Safi : Crusader ; Seleucid ; Greek, 550-350 B.C. ; Early Greek, 700-550 B.C. ; Early Hebrew ; Late Bronze Age and Early Bronze Age. Four structures piled above each other on different levels belong to one or other of these periods. The complicated walls of these structures were cleverly unravelled by Bliss and Macalister.

The lowest structure belongs to the Late Bronze Age, and is one of the Canaanite high places so frequently referred to in the Old Testament (2 Kings xviii. 4 ; 2 Chron. xxxiv. 3), evidently a temple for sun-worship.

Roughly speaking, this high place consisted originally of a series of standing-stones, arranged in a rough sort of circle, each stone standing on a base block, one having two bases, to prevent their sinking in the debris.

Three of these standing-stones were found in position, a fourth was found with its base built in a late wall, and the bases of the other two were found in such positions as make it likely that they stood in a circle.<sup>1</sup> The three monoliths still standing vary from 6 to 7 feet in height. Their cross dimensions vary from 27 by 19 inches to 31 by 24 inches. They are simply rough, oval, tapering blocks with no dressing, and much worn by exposure, being soft limestone. A row of field stones

<sup>1</sup> *E.P.*, Pl. 8.



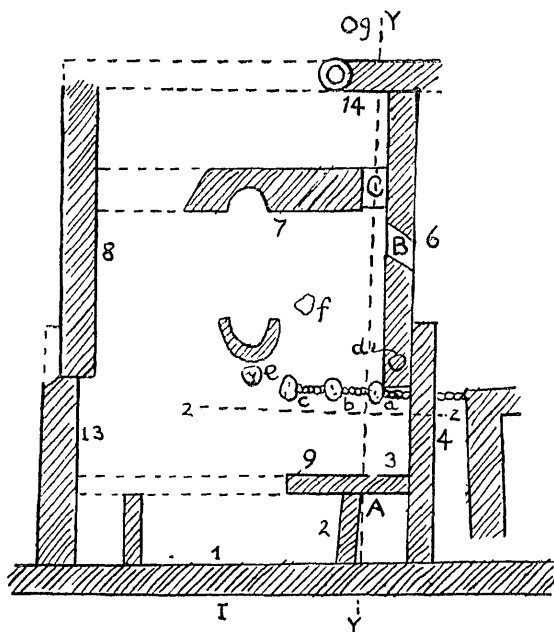


FIG. 5.—HIGH PLACE AT GATH.

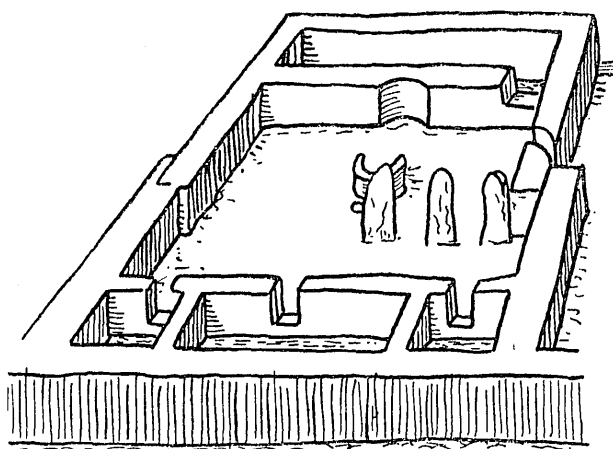


FIG. 6.—ISOMETRIC VIEW OF THE HIGH PLACE, TELL-ES-SAFI  
(RESTORED).

connected the three and ran outside the enclosure wall. This seems simply to indicate the ground level, so that the blocks stood only 4 to 5 feet above the surface. These blocks stand on the debris of an earlier occupation. In the rubbish south of the monoliths bones of "camels, sheep, and cows" were found—remains of sacrifices—on the level of these field stones connecting them.

At a later period these monoliths had an enclosure built round them, consisting of a *central court*, or *temple proper*, with the monoliths inside it, measuring 32 feet east to west and 30 feet north to south. In the north wall of this chamber is an apse 53 inches across and 29 inches deep; and a short distance south of this apse is a rude semicircle of stones 20 inches high, consisting of two courses. This semicircle facing the apse is 43 inches in diameter, and it had probably lost four or five courses of its height.

South of this central chamber there had been three small chambers with corner-doors leading into them from the central chamber. To the north of it, and entered also by a corner-door, was a long hall or corridor, extending the whole breadth of 32 feet and being about 12 feet in depth. This had been the inner sanctuary.

This appears to have constituted the high place of Gath at somewhere about 1400 B.C. or earlier.

A SKEWED DOOR.—On the east wall is a skewed door (B), cut in such a way as would allow the sun to pour its full light upon the apse at a certain period of the year. Macalister, therefore, thinks the door was cut expressly in this manner for some religious purpose. It might, of course, admit the very first rays of the rising sun at certain times. Bliss, however, doubted if it had been a door at all, and thought it was an accidental break, and the worn stones of the threshold also might be simply stones taken from another building. The point awaits confirmation.

If Macalister here means that the skewed door was intended to admit *the very first rays of the rising sun*, it would be quite intelligible, and a possible explanation, since it could admit the rays of the sun just leaving the horizon, whether the enclosure were roofed or not.

Another doorway (A), with footworn threshold, was found leading into the east chamber south of the monoliths; and a similar footworn threshold was found at (C), which had been a



corner-door leading into the large northern chamber. These three thresholds are all practically on the same level, as the rude paving of field stones between the monoliths shows, and it was this fact which proved the building to belong to the same period and to be the enclosure of the high place.

With this high place, which was originally a rude circle of monoliths, compare the stone circle set up by Joshua (Josh. ii. 4-8, etc.) to commemorate the crossing of the Jordan, from which Gilgal, "the Circle," got its name.

The enclosure of this high place is irregular in form. Its walls run parallel from north to south, till they reach the line of the monoliths. There the external walls of the southern section overlap the walls of the northern section, so that the breadth at the south is increased to 38 feet. The total length of the enclosure from north to south is about 54 feet. The walls are about 3 to 4 feet in thickness.

#### THE HIGH PLACE AT GEZER

From the accompanying sketch-map of the excavations on the mound of Gezer it will be seen that the plan of the town as enclosed by the outer and latest wall resembles the form of an axe, with the broad edge to the west and the long sides facing north and south. The various discoveries of importance are located on the plan. The high place or sanctuary occupied a very central position. It joins on to the north wall almost at the centre and extends southwards towards the central valley. This space had been chosen for this purpose for its central position certainly, but also on account of the proximity of the two caves which played a prominent part in the religious ceremonial. The space was kept free of secular buildings till a late period, and it was never completely built over.

A detailed map of the high place itself is shown on p. 70. The chief details are the caves, the standing-stones, the subsidiary buildings, and the objects found within the area.

### III. STANDING-STONES AND CUPS AND CAVES

#### THE HIGH PLACE AT GEZER

##### *Cup-Hollows, Pillars, and Caves Associated.*

Two underground chambers were associated with this high place. Originally these had been separate cave-dwellings, occupied by Neolithic cave-dwellers. When this high place

was made, the caves were connected by a narrow crooked passage. One is a chamber 40 feet in diameter, and could be used as a congregation hall for the people. The other is only about 8 feet at its widest, and must have been incorporated for some other purpose. The dome-shaped cell in the large cave, with its separate roof entrance from the rock surface, may or may not have been incorporated in the high place.

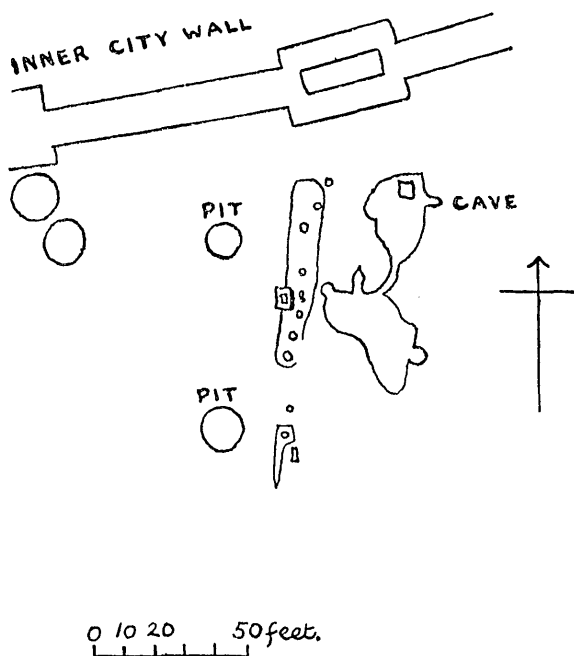


FIG. 8.—GEZER HIGH PLACE.

In the contents of the 2-foot layer of debris on the floor of the caves, which were of the Neolithic period, nothing was found to associate them originally with a religious cult of any kind. They had simply been cave-dwellings, and had no religious significance at first.

### *Stone of Sacrifice.*

EARLY AMORITE ALTAR.—On the floor of the larger cave was a rough, undressed (Exod. xx. 25 ; Josh. viii. 31) stone block, 18 inches square, on which was stretched the skeleton

of an infant. This may have been the last sacrifice made in the cave left *in situ*, as infant sacrifices were generally buried in the high place area. This stone lay above the 2 feet of debris which represented the cave-dweller occupation. It was, therefore, an early Amorite altar. If this was an infant sacrifice, the cave must have been the place of sacrifice.

The smallness of the stone of sacrifice here indicates that no elaborate selection or preparation of a stone for an altar

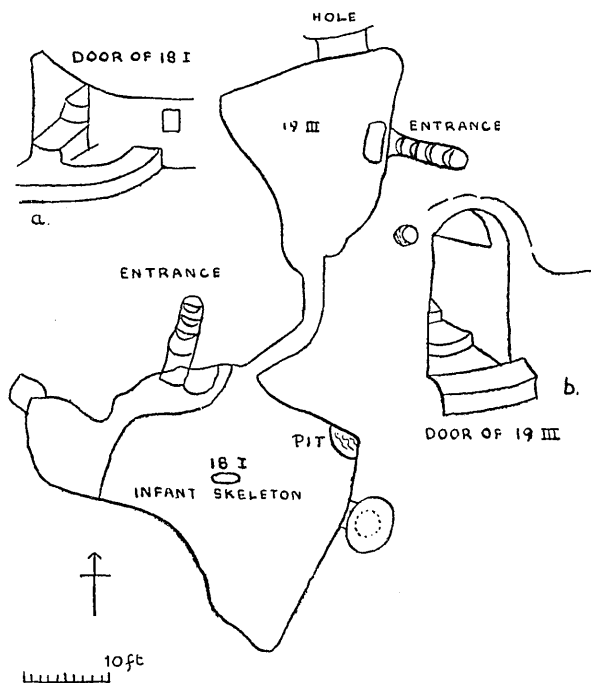


FIG. 9.—HIGH PLACE CAVE, GEZER.

was made, and this is in accordance with the Old Testament records, where also it appears that any suitable stone found on the spot was set up as an altar or as a pillar, when the occasion demanded that sacrifice or an offering should be made, or for the commemoration of any important event. Instances of such pillars set up by Joshua and Jacob are mentioned above. All these stones were undressed; and similarly undressed stones were used as altars or for building altars—*e.g.*, at Ebal by

Joshua (Josh. viii. 30-31). In 1 Samuel vii. 12, Samuel set up a similar stone and called it Ebenezer.

### PLACE OF ORACLES

The narrow crooked passage joining the two caves is made so that the voice of one speaking, even whispering, in the smaller cave, can be easily heard at the end of the passage in the larger cave, but the speaker remains unseen. On this account it has been suggested that the smaller cave was the secret recess, the Adyton, the Holy of holies, not to be entered by the ordinary congregation, and from it oracles were uttered by a confederate to the consulting priest and his audience in the larger chamber.

As Robertson Smith suggested, the *μέγαρον* of Greek temples may not be the Greek word for "hall," but may be the Hebrew word *מַעְרָה*, Arabic *مِعْرَة*, meaning "a cave," transferred to the Greek language.

Similarly, we find in 1 Kings vi. 19 the Holy of holies described as the *דְּבִיר* or "Speaking-place." With this, also, we may compare Jeremiah xxxvii. 17, where Zedekiah asks Jeremiah, "Is there any word from the Lord?" and Jeremiah xlix. 14 and Obadiah i. 1, where both prophets use practically the same words: "We have heard a rumour from the Lord."<sup>1</sup> These passages seem to indicate clearly that messages came to the prophets from the inner sanctum, or Holy of holies, and it may be another instance of Canaanite ritual surviving, and used, in the worship of Jehovah.

The crooked passages in Cave 28, II, and Cave 30, IV, at Gezer, and in the Shephelah caves, may be instances of the same practice.

We should note that the smaller cave had been intentionally closed up. The hole in its north wall, which had been the entrance, was blocked up inside and outside with large stones, so that the cave was purposely converted into a secret chamber, and could be entered only by the passage, while it could not be lighted at all from without.

### THE STANDING-STONES AT GEZER

In all there were ten pillars, eight complete and two broken stumps standing in practically a straight line, north to south, on

*Cf.* also, perhaps, Saul and the witch at Endor.

the high place at Gezer. This complete line of them covered a distance of 55 feet. All, except one, are of local limestone, and all are undressed, which accords with the injunctions of Exodus xx. 25; Joshua viii. 31; 1 Kings vi. 7; though several have cup-hollows. Apparently the tools used in making these did not desecrate the stone, or, as is more likely, the cup-hollows belong to the Canaanite occupation. The highest pillar was 129 inches, the lowest 65 inches. They varied in breadth from 60 to 14 inches, and in thickness from 30 to 15 inches. The longest interval between them was  $13\frac{1}{2}$  feet, and the shortest about 3 feet.

The dimensions of these stones and the intervals between them thus vary so much that neither appears to have had any special significance. Except that they were set originally in a straight line, there is no evidence of any definite purpose such as orientation in the arrangement.

At Tell-es-Safi (Gath) three pillars were found, of much the same size as Pillars 5, 6, and 7 at Gezer; but they ran east to west, while at Gezer the line runs north to south.

PECULIARITIES OF PILLARS.—Pillar 1 had a V-groove like a rope-mark on the top, and a cup-hollow in the centre of its western face, about 12 inches from the top. Buried near its base, lay another pillar of about the same height as Pillar 2—viz., 65 inches.<sup>1</sup> This may be an instance of twin-pillars (god and goddess), such as are reported from Tyre, Paphos, Hieropolis, and Jerusalem.<sup>2</sup>

Pillar 2 has several smooth spots on it, which (Macalister suggests) may have been the result of the kisses of devotees, such as we see in the Holy Sepulchre and elsewhere in Jerusalem.

Pillar 3 has a cup-hollow 6 inches in diameter, 24 inches from the top and 3 inches from the northern edge.

The fourth is the highest, and the next two are insignificant.

A TROPHY OF WAR.—Pillar 7 is a stone imported from some other place.

It is full of small crystalline formations. It is quite likely that this is a stone, a trophy of war, taken from the high place of a captured town, perhaps Jerusalem,<sup>3</sup> by the Gezerites, as if in taking the stone they took also the protecting deity with

<sup>1</sup> The height of the ten pillars in order is: 122, 65, 115, 129, 70, 84, 87 inches. No. 8 broken, 84 inches; No. 10 broken. See G. II, 385 ff.

<sup>2</sup> Robertson Smith, *Rel. Sem.*

<sup>3</sup> See T.A. Letters.





them. Similarly the Philistines stole the Ark (1 Sam. iv. 3). The curious, curved, shallow line on its smooth surface certainly looks as if cut to keep the dragging rope or chain from slipping.<sup>1</sup>

In the Moabite stone inscription Mesha boasts that he dragged the Arel (or Ariel) of Dodah from Ataroth of Gad, and placed it before his god Chemosh at Kerioth.<sup>2</sup> Further down, he says he took from Nebo, apparently a Hebrew stronghold,<sup>2</sup> "the ariels of Jehovah and tore them before Chemosh." This word "arel" or "ariel" in the inscription is usually translated "altar-hearth," without any definite explanation of what that may mean. For ariel in the O.T. see Ezra viii. 16 and Isaiah xxix. 1. That the word means the "Home of the Deity" is much more likely and intelligible.

The word translated "dragged" or "tore" is used by Jeremiah (xv. 3) of dogs dragging or tearing corpses, and also in 2 Samuel xvii. 13 of dragging the city, to which David fled from Absalom, with ropes into the river. Macalister suggests that this may mean, not the dragging of the whole city, but simply the pillars of the high place, the ariels, or Home of the Protecting Deity, into the river, as if these pillars were identified with the city itself. Certainly the pillars could not be dragged without first capturing the city. The intention of Hushai, in this passage (2 Sam. xvii. 13), is clearly to utterly destroy the city and David with it, and the final act of destruction intended was very likely the dragging of the ariels of its deity into the river to desecrate them, just as Mesha appears to have done. There is every probability that David here took refuge in a city that was still Canaanite, but Hushai would not have shirked "dragging the city" even if it were Hebrew and worshipped Yahveh.

The space between Pillars 7 and 8 is the longest, 13½ feet, and Pillar 8 is broken.

The ninth pillar has two cup-hollows on its face, with "meandering" channels between them.

The tenth is also broken.

ALTAR OR BASE SOCKET.—Between Pillars 4 and 5, to the west of the line of pillars, lay a rectangular block, measuring 73 by 60 by 30 inches, having a rectangular hole cut on the top, 34 by 23 by 16 inches.

<sup>1</sup> G. II, 392 f.

<sup>2</sup> See Jer. xlviii. 24; Amos ii. 2; Num. xxxii. 3 (Ataroth); Isa. xv. 2 (Nebo).

This has been explained (1) as an altar ; (2) as a socket, perhaps for an asherah pole or for a monolith ; (3) as a laver for ceremonial ablution, such as was found in Sinai at Serabit-el-Khadeem by Petrie ; and (4) as a place of sacrifice.

The most likely explanation is that it was the socket-base of a standing-stone.

**BUILDINGS.**—Before summarising the details and giving our conclusions, we shall now describe the subsidiary buildings attached to this high place and the objects found within its area.

The high place area measured approximately 150 feet north to south and 120 feet east to west. There had never been an enclosing wall around it, but the space had been left unoccupied till a late date, when houses had to be built on it, because of want of building space within the city walls, and the place had lost its sacred associations to some extent.

Its northern edge was bounded by the great inner city wall, which is of very early date. The pillars ran down the centre of the area.

**CIRCULAR BUILT PITS.**—On the west side of the line were found two circular walls, one at the north and one at the south end. The north one was of rough field stones and mud built round a cobble-stone floor, and stood 6 feet high. The rock surface had been levelled up by 12 to 21 inches of earth, and on this the cobble-stone floor was laid. This floor was on the same level as that of the platform on which the pillars rest. The wall has a batter outwards from bottom to top, being about 24 inches thick at the base and 12 inches at the top. The floor of this pit was about 14 feet in diameter at the bottom and 16½ feet at the top. There was no coursing in the masonry, and *no door*.

The southern pit was much more completely ruined. The paved floor was over 18 feet in diameter, and the pit must have been slightly larger.

**CONTENTS.**—On the paved floor, inside the north pit, lay a large collection of Cypriote pottery in fragments, grey cyma-shaped bowls with wish-bone handle, dating from 1400 B.C. to 800 B.C. In the middle of this heap was a small serpent in bronze, about 7 inches long. This may be a votive offering in connection with the serpent-worship, which seems to have existed in Palestine, and even among the Hebrews, as 2 Kings xviii. 4 shows.

These pits were evidently not used as depositories for the refuse of sacrifices, as might have been expected, for this was found further to the east. It is quite possible and seems very likely that they had been sunk into the debris much later, at a period when the high place was practically buried. The masonry is exactly like what we found in pits sunk through debris in Ophel, rough stones set in mud, and laid against the earth sides of an excavated pit which supported them. The pile of pottery thrown in in a heap supports the supposition that these sherds had been thrown in during a clearance at a much later date than they belong to, though it is difficult to explain why only Cypriote ware was found.

No buildings were found on the east side of the pillars.

### THE SACRIFICIAL REFUSE PIT (GEZER HIGH PLACE)

The refuse pit for sacrifices was a disused bell-shape cistern, 16 feet deep, cut in the rock east of the caves. In the centre of its floor was the usual circular filter pit for collecting mud, in this case 56 inches wide and 24 inches deep. Round the mouth a series of cup-hollows were cut<sup>1</sup> on a rock platform 4 to 15 inches above the level of the rock surface around it. These cups vary from 3 inches to 6 feet in diameter. The deepest is 36 inches. The others are mostly shallow saucers.

CONTENTS.—At the bottom of the pit was 2 feet of alluvial deposit, showing that it had originally been a cistern. Above this was a layer, 23 inches deep, of bones and large stones mixed. Above this, again, was another layer of alluvial deposit, 40 inches deep, and then the usual cone-shape filling of earth that had gradually filtered in.

BONES.—The bones consisted of skeletons of human beings of both sexes—fourteen men, two women, one child of about twelve years, and one infant. Mixed with these were the bones of cows, sheep, deer, and goats. All lay as if the bodies had been allowed to float in the water and disintegrate without interference. Macalister thinks these were simply bones of sacrifices—the bodies being thrown in after the rites were completed.

There is, of course, the other possibility, that these human bones are those of people who had been thrown into this disused cistern, as Jeremiah was (see Jer. xxxvii. 16 ; xxxviii. 6).

<sup>1</sup> G. II, 400, Figs. 487-490.

It may, in fact, have been a prison where unwanted people were left to perish, or a place of execution. The large stones may have been thrown in at the victims to hasten their end. The bones of cows and other animals may have been the remains of sacrifices.

In fact, the pit had originally been a cistern. Later, it was used as a refuse pit for sacrifices; and later still, probably as a prison. That it was still later used as a cistern again, is hardly likely. The 40 inches of alluvial silt above the bones had probably been washed in by rain, the cistern having been fed by surface drainage.

The infant burials found within the area have been dealt with under Infant Sacrifices.

OBJECTS FOUND.—The objects found within the area of the high place were chiefly domestic utensils. Cult-objects, however, were also found, such as small figures of deities, and emblems, the most interesting being a bronze statuette of Astaroth Karnaim, Astarte of the two horns and the serpent of brass.<sup>1</sup> Figures of the Egyptian god Bes, belonging to the later occupants of the area, were also found.

CONCLUSIONS.—1. The standing-stone or pillar is an emblem, not of the earliest religion of Palestine, but of the Semites. It was introduced into Palestine by the Amorites.

2. The site was chosen because of the suitability of the two underground caves.

3. The date of this high place is fixed by scarabs and pottery to a period about or prior to 2000 B.C.

4. There seems to have been a gradual elaboration of the high place by the addition of pillars and buildings from time to time, the work, perhaps, of successive "kings" or governors.

That there had originally been rooms provided for the priests within the area, is most probable; but the house walls found on it point to a later period, when the area had to be encroached upon for want of building space within the city. Nothing was found within these to connect them with the high place.

5. There was no indication found of when the various pillars were erected; but Pillar 7, which, we saw, seems to have been "dragged" or imported from some other place, may have been taken from Jerusalem during the war spoken

<sup>1</sup> See under Other Cult-Objects.

of in the Tell-el-Amarna Letters,<sup>1</sup> when Gezer joined the assailants against Jerusalem, in the fourteenth to fifteenth century B.C.

6. The celebrations on this high place appear to have been much like those suggested in Isaiah lvii. 3-5. The description of the Jews in that passage (as "sons of the sorceress, children of the adulterer and the whore"), in verse 3, may contain a reference to the Amorites and Hittites as founders of Jerusalem, such as is found in Ezekiel xvi. 45. As they built their city, so also did they hand them on their idolatry.

7. The Canaanite inhabitants of Gezer sacrificed their first-born children, probably the oldest male child, to their deities. This seems proved by the great number of jar-burials of infants found on the high place area. All the skeletons examined showed that the infant died before it was more than a week old.

8. Even after the area was built upon, the place retained its sacred character.

9. With regard to the addition of pillars from time to time, it seems likely that these may have been added to celebrate great events, such as victories over enemies, if they were not actually sacred pillars taken from various captured towns.

10. The cup-hollows on these pillars were all on their western faces, and the caves were east of the pillars; but whether this indicates that the worshipper faced the east, we cannot definitely say. The western faces of the pillars are also smoother than the eastern faces. These details, with the position of the caves, suggest that the worshipper had faced the east.

#### SEMITIC TEMPLE AT GEZER (G. II, 406)

This building was found in the Late Bronze Age stratum. It has no connection with the high place.

The chief features are the south wall, which is divided into two sections, not running in line, and leaving a gap entrance between them, 10 feet wide (*a-b*).

To the west of the entrance is a forecourt, leading into a paved chamber, but separated from it by four round column-bases, each 24 inches in diameter. These bases had supported the wooden pillars of a paved portico on the west of the forecourt. The paved floor remained *in situ*. The chamber proper, or cella, has entirely disappeared.

<sup>1</sup> See *D.E.E.O.T.*, pp. 58-59.

STANDING-STONES.—South of this row of columns was a long, narrow courtyard, containing five monoliths<sup>1</sup> or massēboth covering a distance of about 45 feet. The largest of these is 7½ feet high by 18 inches broad and 17 inches thick. As in the high place, these run north to south. There had probably been seven in all, as two were found built into the wall. These monoliths are roughly squared, and on this account

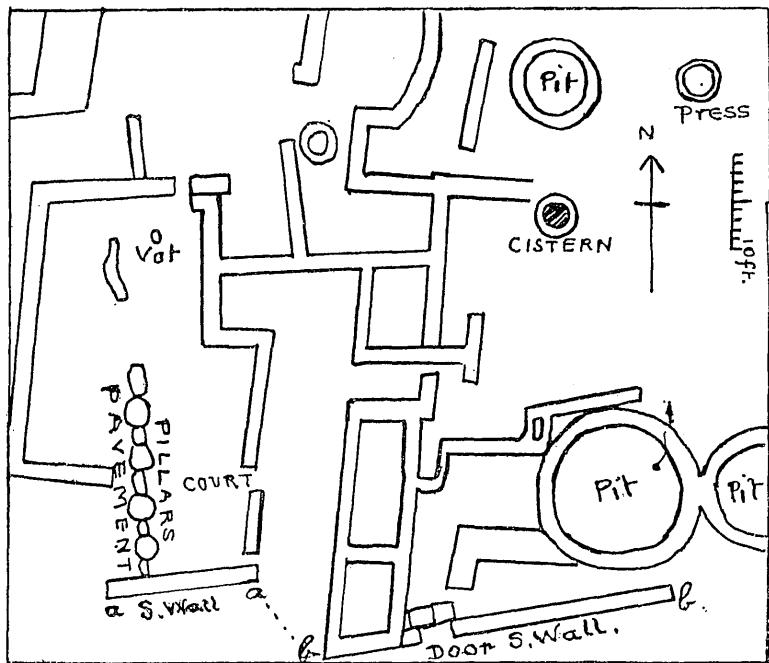


FIG. II.—SUPPOSED SEMITIC TEMPLE AT GEZER.

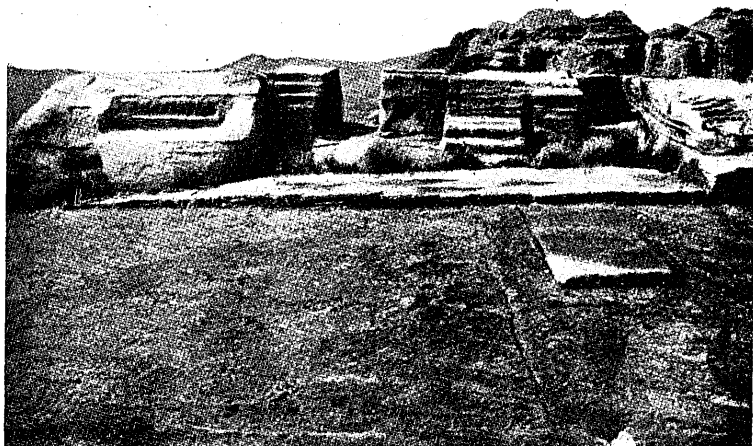
may not have been massēboth: yet they cannot have been pillars to support a roof, because of their shape, size, weak foundations, and rough tops.

In the forecourt horus-eye amulets and a bronze figure of a goddess were found.<sup>2</sup>

SACRIFICIAL REFUSE PITS.—East of the forecourt was a group of circular pits such as were found on the high place area. These were completely filled with the bones of sheep

<sup>1</sup> G. II, 408, Fig. 493; III, Pl. 223.

<sup>2</sup> G. III, Pl. 211-212.



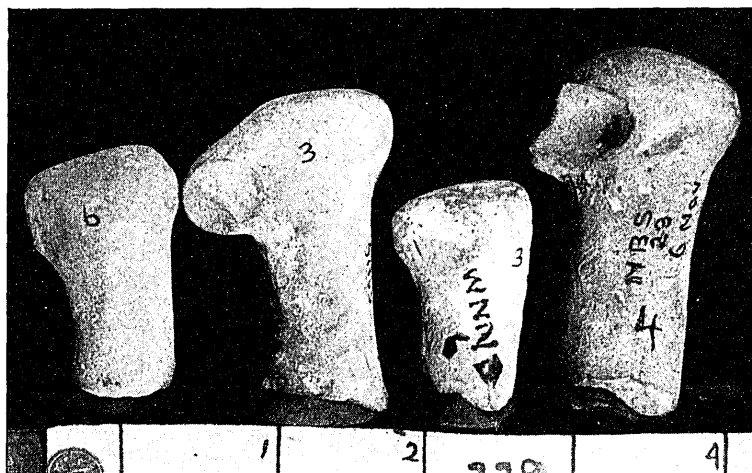
THE ALTAR - HIGH PLACE AT PETRA.



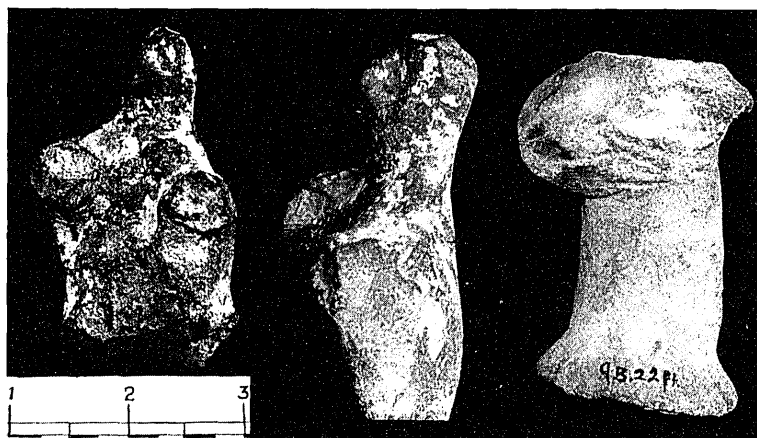
ALTAR? OR SOCKET-STONE AND PILLARS VII, VI, V WITH SHADOW OF  
IV—GEZER HIGH PLACE.

facing p. 76.





OPHEL-BIRD-FACE, LONG NECK—cf CRETAN.



OPHEL-BIRD-FACE ASTARTE: HEADLESS PEDESTAL DO.

facing p. 77.

and goats, which had been offered in sacrifice. There is no trace of burning on these bones. They are simply the remains of animals that had been slaughtered in sacrifice, not domestic ash-pit refuse.

SAMSON (*Judg.* xvi.).<sup>1</sup>—The temple in this chapter (*Judg.* xvi.) appears to have been a building similar to this. It must have consisted of a forecourt open to the sky, with a "deep, distyle portico," and an inner chamber with a flat roof. The lords of the Philistines (v. 23) were assembled in the shade of the portico, the people were on the flat roof, and Samson was led in to make sport for them. Probably, when weary, he was allowed to lean against the pillars of the portico to rest; and he seized that moment to pull the wooden pillars off their supporting bases, thus bringing down the roof and the people on it upon the heads of the assembled lords.

DATE.—According to the stratum in which it was found, this supposed temple would date between 1400 and 1000 B.C. It is quite likely, however, that it is built on an ancient site of the Canaanite cult, and the standing-stones may date much earlier.

#### HIGH PLACE AT PETRA

Petra is the site of the ancient capital of Edom, and here was found what is, perhaps, the most complete Canaanite high place known. This high place occupies a ledge of rock, 500 by 100 feet, on the top of the hills south-east of the theatre.

1. In this rock platform was cut an oblong court, measuring 47 feet north to south and 20 feet east to west.

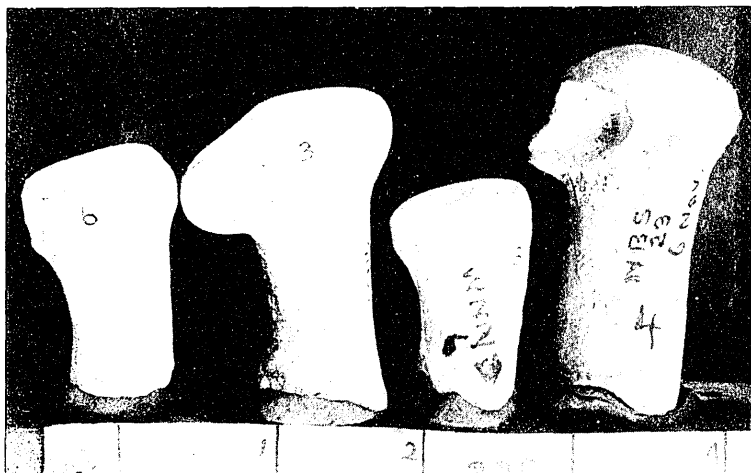
2. About 15 feet west of the centre of this court, with four steps leading up to it an altar is cut in the rock measuring 9 feet long, 6 feet wide, and 3 feet high. On the top of this altar is cut a rectangular basin probably to hold the fire.

3. In the centre of the court just opposite the steps of the altar is a raised platform of rock measuring about 5 feet west to east,  $2\frac{1}{2}$  feet north to south, and 4 inches in height.

4. At the north-west corner of the court a series of steps cut in the rock lead up to the court. This is the main approach.

The court appears to have been the place of assembly for the worshippers: but what exactly was the purpose of the small raised platform in the centre is not quite certain. It is too small to serve as a table for the guests invited to the sacred

<sup>1</sup> G. II, 407-408.



OPHET BIRD-FACE, LONG NECK, GURKIAN



OPHET BIRD-FACE, ASTARTI, HEADLESS, PEDISTAL DO.

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<sup>1</sup> G. II, 407-408.

feast. It may have been a place for bloodless sacrifices, as Dalman suggests.

5. The altar is isolated from the surrounding rock by a passage cut round it, 3 feet wide.

6. At the south-east corner four or five steps lead up from the altar space to the top of the adjoining rock.

7. Just south of these steps is another platform levelled in the rock surface, measuring 11 feet 9 inches north to south and  $16\frac{1}{2}$  feet east to west.

8. In the centre of the platform is a cup-hollow cut in the rock, 46 inches in diameter at the top, 17 inches wide at the bottom.

9. To the east of this cup-hollow is a large rock-cut trough, 67 inches along and 16 inches deep. The cup-hollow is on a higher level than the altar, and too far away to have been used for collecting the blood of sacrifices or playing any part in the altar ceremonies. It must have been used for some other purpose, perhaps for liquid offerings. The trough, with which we may compare the trough found at Ta'anach, was probably used for washing purposes.

10. Thirty feet due south of the large court a large reservoir was cut in the rock, measuring 10 feet north to south, 7 feet 8 inches east to west, and 3 feet deep. Here probably was collected rain water, which formed the water-supply for the high place.

11. A short distance from the court there are two large pillars cut out of the rock. These pillars are 100 feet apart. There is not the slightest doubt that they were part of the high place, and had religious significance, either as symbols of the presence of deity or as the dwellings of deities.

This high place is regarded as dating only a few years before the Christian era; but we have certainly got here the most complete idea of what a high place was in Hebrew times. From it we may gather that the high place invariably occupied a position at a high level, generally on the top of a hill. The cup-hollow of the cave-dweller and the pillar of the Amorite continued to play their part evidently down to Christian times. A space was set apart for the assembled worshippers, and apparently the altar shrine with the adjoining place for liquid offerings were reserved for the officiating priest.

One point we may note, which seems to have been overlooked. The court, which is really sunk into the rock surface, was bound to be filled up with water in the rain seasons; but

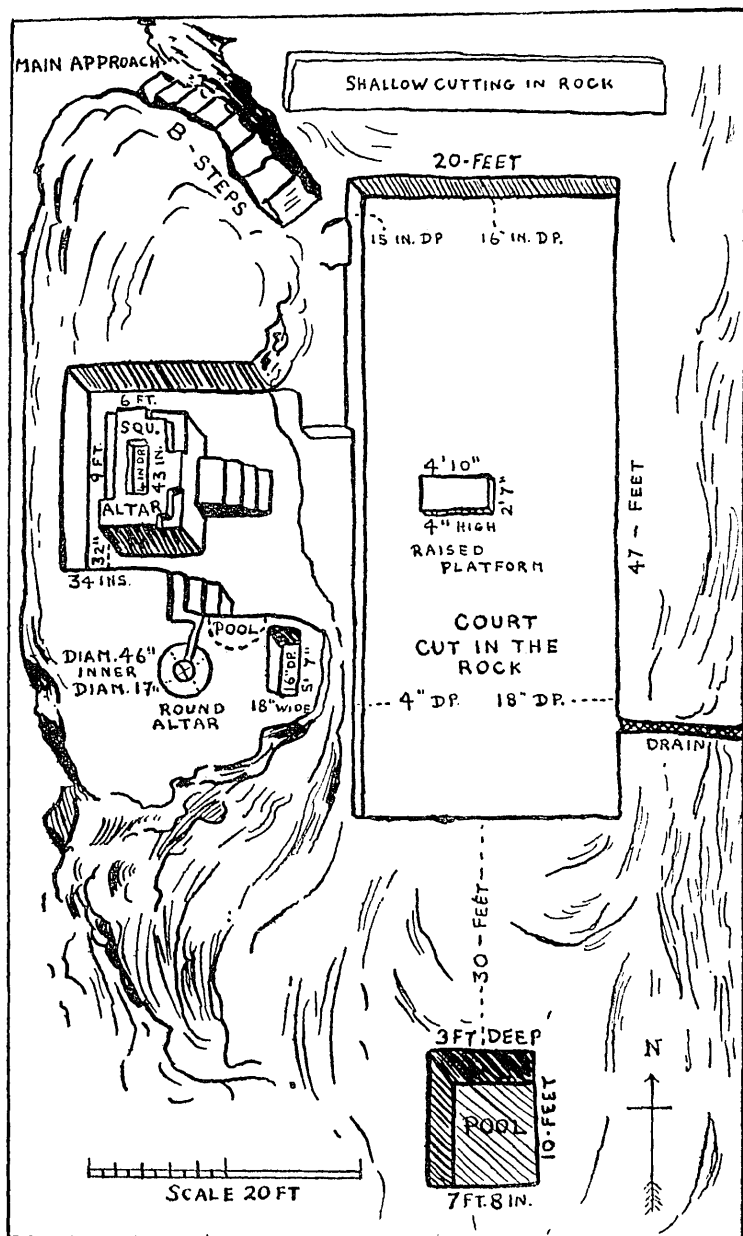


FIG. 12.—PLAN OF ROCK-CUT HIGH PLACE ABOVE PETRA.

near the south-east corner a drain was cut in the rock to carry away the water.

If the large reservoir were intended to collect water, we should have expected the drain to lead to it, and another drain cut to lead away the overflow. The reservoir may have been a pit for the deposit of sacrificial remains.

### ASTARTE<sup>1</sup>

*For O.T., see Jeremiah lxiv. 15-19, Queen of Heaven.*

Terra-cotta figures of an undraped female deity are a feature of every excavation. These are regarded as figurines of the mother-Goddess, Astarte, and the earliest examples date from at least 2000 B.C., some being regarded as earlier. We cannot associate the worship of the mother-goddess with the cave-dweller. It appears to have been brought into Palestine by the Amorites, and the Hebrews to some extent adopted it. These figurines are doubtless the Teraphim, or household gods, of the O.T., referred to in Genesis xxxi. 30, 34, and elsewhere, as well as the images of the Queen of Heaven whose worship is defended by the women in Jeremiah xlv. 15-19.

These figures are found in three forms—viz., plaques, busts on pedestals, and complete statuettes with tenon.

1. PLAQUES.—Some are moulded in low relief on terra-cotta plaques. A considerable number of these plaques was found at Gezer, as well as a number of moulds for making them. Only one hand-modelled figure, and only one showing the back moulded, were found at Gezer. For this latter figure a double mould must have been used.

*General Features.*—In all these figures the female attributes are emphasised. The attitude, and sometimes the moulding, suggests motherhood. The head and body show the front view, but the feet are often turned sideways, as in Egyptian perspective. The Egyptian goddess Hathor seems to have been the prototype. The face is childishly represented. There is neither soul, nor character, nor spirituality suggested in the modelling. Minor features of the figure, such as fingers, toes, or nails, are rarely shown in detail, but one figure shows six fingers on one hand.

*Head-dress.*—There is *always* a head-dress of some sort. The commonest is the Hathor wig, resembling a large letter **S**

<sup>1</sup> The references here to G. are to vol. ii. or to Plates.



FIG. 13.—PLAQUES AND JUG OF ASTARTE.



hanging down each side of the face, and forming a parting where they meet on the forehead. In one figure, of early date (1800-1400 B.C.) (G. 220, 8), the parting is indicated by incised V-shape grooves on the brow. In later examples, the parting has disappeared entirely (G. 220, 11—about 600 B.C.).

In one figure, dated between 1400 and 1000 B.C. (G. II, 412, Fig. 496), the wig is represented by a moulded *band with herring-bone pattern* incised on it. Another example (about the fifteenth century) found in the silt of the water passage (G. 220, 15) has a *sort of veil* thrown over the wig and hanging down behind each shoulder. The parting is shown, but the spirals of the wig are replaced by the veil.

In two specimens (G. 220, 12, 13) the curling of the wig is very clearly shown.

A *cylindrical or conical crown of feathers* placed over the wig, and leaving only its spirals visible, is found on G. 220, 16, 17, 18; 221, 1, and on other examples. In shape this very much resembles the fez or cylindrical cap commonly worn by Oriental gentlemen until recently. In G. 220, 17 (about 1500 B.C.), the lapels and spirals of the wig are omitted. In 220, 18, the lapels are straight, showing no spirals (1000-600 B.C.), and in G. 220, 16 (1400-1000 B.C.) the lapels and spirals are so slender and prolonged as to resemble hooks (*cf.* also G. 221, 1).

Fig. 498 from G. II, 413, has an *elaborate Egyptian headdress*, consisting of the Hathor wig and horns with two maat feathers and a uræus above it.

Seven plaque figures were found, four at Zakariyeh, two at Safi, and one at Tell-el-Hesi (*E.P.* 67, 10-16). These are identical with specimens found at Gezer. They are regarded by Bliss and Macalister as pre-Israelite.

Of these, one (67, 16) from Safi is peculiar on account of the shallow "smoking-cap" head-dress and the loose arrangement of the hair. It is also steatopygous.

*Adornment.*—Usually, there is none.

A few figures have *anklets* moulded on the lower part of the leg, generally three or four, but in one case only one. The same may be said of *bracelets*. One (G. 220, 22—1000-600 B.C.) has bracelets on the left arm only; another on the right arm only (G. 220, 12), and another on both arms (G. 220 20), and one (G. 220, 21, Hellenistic) late figure has both bracelets and anklets.

*Armlets* on the upper arm are rare, and occur at Gezer only on the latest examples.

*Necklaces* are also uncommon. They are usually of beads, generally of the pendant bottle-shape common in cornelian in the XVIII Dynasty in Egypt, and since found to be common also in the time of Solomon in Palestine.

*Gezer*, Plate 220, 20, has one string; 220, 23, has three strings; G. 220, 21 (Hellenistic), has one string and a pendant (*cf.* G. 220, 16), the string being crossed under the chin; G. 221, 1, has one string and pendant; while G. 220, 17, has a triple string represented apparently by painted lines on the neck. These fit closely like torcs.

In G. 221, 19, the necklace is crossed and has a pendant. Both are painted on in black.

*Veils, Ear-rings, Necklace and Crescent Pendant, Pectoral.*—G. II, 414, Fig. 499 (1400-1000 B.C.), has a veil over the head and down the back (*cf.* G. 220, 15 for veil). G., Pl. 221, 2, is another of the three broken specimens of this type found. This is quite an unusual type.

Besides the veil, which does not hide the grossly exaggerated nudity of the figure, this figure (G. 221, 2) has *ear-rings* of the style on G., Pl. 136, 5, similar to those of the Solomonic period from Tell-Fara. This is the only type which is found with ear-rings, and the only type of ear-ring found on these figures.

A necklace of beads with a *crescent amulet pendant*, and a *pectoral* of beads or stones on the chest between the lapels of the wig, threefold bracelets and amulets complete the adornment.

In the hands is a flat circular disc decorated with a double row of small bosses, and one hand has six fingers. For the crescent *cf.* G. 221, 26, which was found on the rock.

Pl. 221, 2, from Gezer, seems to be the middle section of this or of another exactly similar figure.

*Gerar*, Pl. 35, 14, is a somewhat similar type, which is assigned to the eleventh century B.C. Here the arms are in a different position, but in the hands is a disc. This disc is probably a cake offered to her, and not a tambourine, and recalls the passage Ezekiel iv. 9-12, where the defilement of the barley-cakes seems to be an intentional slur on the Astarte worship, and Jeremiah xlv. 19, where cakes were made for the worship of the Queen of Heaven.

*Attitude of Figures: Disposal of Limbs.*—1. Hands. The hands are often down the sides against the flanks or hips (G. 220, 13; 221, 11—1800-1400).

2. In most figures the hands are raised (E.P. 67, 13), arms V-shape (G. 220, 14; 221, 12), and hold an object such as a lotus flower (G. 221, 12, etc.).

3. More frequently still, the hands grasp the breasts (G., Fig. 500—1000-900 B.C.), or are crossed under the breasts (G. 221, 13—1400-1000 B.C.; 221, 14—600-100 B.C.; G. 220, 7; 19, 17).

4. Sometimes one hand holds a breast and the other hangs down (G. 221, 15, and 221, 6, water-passage), and:

5. Sometimes one hand holds a breast and the other rests on the lower body (G. 220, 18—1000-600 B.C.; 116, 14, late).

6. In some the hands grasp lotus buds (G. 220, 20, 22; 220, 12; G. 19, 16, mould, etc.).

7. Sometimes the hands hold other objects which cannot be identified—G. 220, 14, pomegranate or pine-cone (?); 221, 6, in left hand a sistrum (?); G. 221, 10, seems lotus buds; 221, 19, the lotus buds become serpents; E.P. 67, 11 &. ; E.P. 67, 15 s; E.P. 68, 2 H; G. 221, 2, a disc or cake.

8. In (G. 221, 14) one very late figure *the arms are folded under the breasts* (500-100 B.C.).

The Astarte figurine found near the temple of Astarte at Beisan is of this plaque type. The hands are folded round the breasts, and lie flat on the chest above each breast; while down the back of the shoulders is a veil painted criss-cross pattern. The breasts and navel are exaggerated, but the head is gone.

Many of these plaques have a moulded border beginning at the feet, running up both sides and forming an arch at the top (G. 221, 3). In some instances it runs under the feet too, (G. 221, 7 and 8). *The oldest example found* (G. 221, 7) is a heavy lump of clay with a miniature stamp of the figure. It was found on the rock surface at Gezer, and dates thus *prior to or about* 2500 B.C.

*Lotus Flowers.*—This border is often broken at the top and resolves itself into the stems of two lotus flowers (G. 221, 4, 5) almost meeting above the head. Sometimes the stems are shortened, so that the buds are at the elbows (G. 220, 21; 221, 3), so that the figure could hold one in each hand (E.P. 68, 2 H). See Gezer, Fig. 498.

In one (G. 221, 9) the lotus buds have developed into a zigzag form resembling serpents.

Of the plaque figures, by far the commonest types are G. 220, 20 and 21.

*Date of Plaques.*—The oldest (G. 221, 7) was found on the rock and dates prior to 2000 B.C. As none have been found in caves with cave-dweller pottery, we must associate these figures with the Amorite immigration, and regard them as part of their religious ceremonial. From 2000 B.C. downwards these plaques become quite common, and are found in other sites as well as Gezer, though Gezer has supplied the largest number. They become most common in the transition or Judges' period, between 1400 and 1000 B.C., the period when the Hebrews were acquiring possession of the land and "driving out the Canaanites," and they do not disappear at Gezer till the final destruction of the town.

Two specimens were found in late tombs (G., Tombs 10 and 76, shown on Pl. 116, 14, and Vol. I, 333, Fig. 172). One of these has armlets.

No special type belongs to any special town, district, or period, except perhaps those in the south, which show strongest Egyptian influence about the fifteenth century and again at the sixth century B.C.

2. PILLAR OR PEDESTAL FIGURES.—These consist of a bust with exaggerated breasts, with a pillar-base to stand on. The plaques had been hung on a wall. About 600 B.C. the Cypriote pillar form became common, and took the place of the plaques. In these, the legs and lower part of the body are not shown, but are merged in the pillar. The breasts are greatly exaggerated, and the arms are folded under the breasts, though sometimes the arms hang down by the sides.

The heads are separately moulded, and morticed on by a tenon (G., Fig. 502; *P.E.F.* IV, 184, Fig. 194; *E.P.* 68, 9 J, and photos from Ophel).

These are known as the "Snowman" type of Astarte. A somewhat crude example (G. 221, 26a) was found at Gezer, in which there is very little attempt at modelling the features.

In many of these the heads and features are distinctly Egyptian, the face being coloured white, perhaps with lime-wash. The head-dress is usually, though not always, the curled wig, and the expression on the face is utterly inane.

These figures were probably all painted in red and white.

The specimens which I found on Ophel all showed traces of colouring, and another example was found at Gezer painted red (G. 221, 26). This last had a crescent pendant, and was found on the rock surface. It was, however, a complete figure, not a pedestal-Astarte.

*Date.*—These pedestal figures all belong to the latter part of the period of the Hebrew kings, roughly about 800-600 B.C. Samaria has definitely dated them to the period bordering on the Hellenistic—*i.e.*, about 600 B.C.

3. BRONZE FIGURES: ASTARTE OF THE TWO HORNS, FIFTEENTH CENTURY B.C.—A nude female figure in bronze, measuring about  $4\frac{1}{2}$  inches in height, was found in a much ruined chamber, which belonged to the Hebrew stratum (1000-600 B.C.) (G. II, 419, Fig. 504).

Along with it was a large hoard of pottery and lamps. Of these lamps, many are the earliest Canaanite type, and some are of the type usually assigned to the Hebrew period. The same may be said of the pottery. This bronze figure may therefore date about the fifteenth century B.C., the XVIII Dynasty period of Egypt, when Egyptian influence was strong. It has a tenon under the feet for fixing it in a block of wood or other base, like similar statuettes of deities in Egypt.

It is a figure of Aštorath Karnaim, Astarte of the two horns (Gen. xiv. 5). The arms are down by the sides, and of exaggerated length. The ears, especially the left, are prominent. The eyes are now empty sockets, but had contained pearls or some precious stones. The head-dress is cylindrical, like the feather headgear referred to above (G. 220, 16, etc.). The horns, which spring from the head just above the ears, are of the ram's horn type, very slender, and curl downwards.

4. IVORY.—Two ivory plaques with similar figures of the Hellenistic period (500-100 B.C.) were also found at Gezer (G. 221, 17, 18).

5. ASTARTOID VASES.—Vases made in the shape and exhibiting the attributes of the mother-goddess, have been found at Gezer and Gerar.

The best example is the complete vase from Gezer (I, 306, Fig. 162). It is 10 inches high, has a fillet round the head, a collar round the neck, and bracelets, but is otherwise nude. The body is exaggerated, and the legs dwarfed, naturally, to give the vase more holding capacity. The left foot is broken,

but on the right the toes are detailed. There are holes through the shoulders, probably for suspending the vase, which resemble the cord-eye handle jugs. This vase or jug, like the jug in the form of a cow (G., Fig. 161) found with it, seems to be of Cypriote origin, and dates about the fifteenth century B.C. *Gerar*, Pl. 35, 20, is a fragment of a similar jug, dating about 950 B.C.

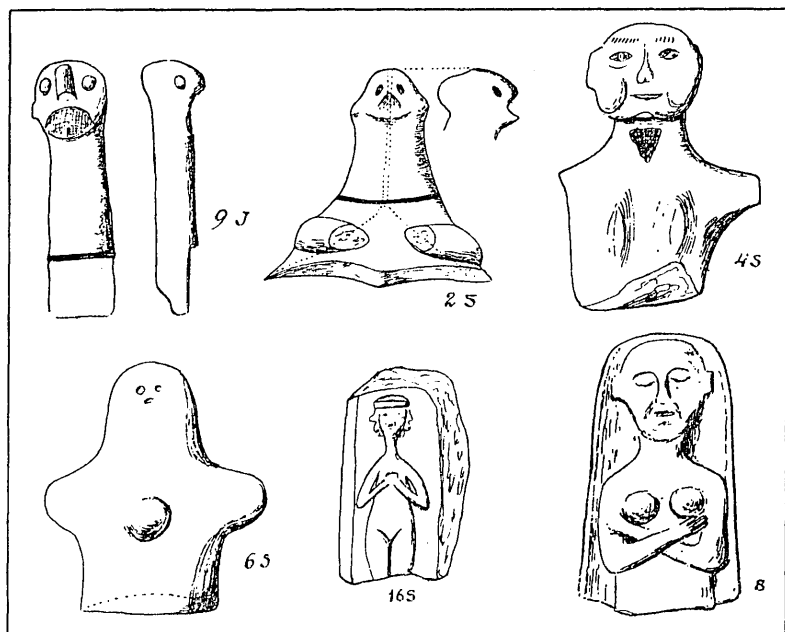


FIG. 14.—ASTARTE KARNAIM, AND BIRD-FACE, ETC., FROM *E.P.*, PL. 67.

Another example from Gezer is a jug of the saucer-lip type (G. II, 420, Fig. 505), probably dating about 1300-1100 B.C. Compare also *E.P.* 67, 2, the lid of an Astartoid jar.

Other examples are G. 18, 1-3, pedestal figures; G. 26, 8 unusual type on plaque; and G. 24, 2, showing feet sideways and with a very narrow waist.

6. There is also the bird face or pinched beak type which I found on Ophel. This type seems to have close affinity to Cretan figures of the same form. The arms are extended slightly forward, as if to embrace all in the mother-love; but this is the only indication of motherhood suggested. The

breasts are not even suggested. This type I have always regarded as the oldest, which is very likely true if it is of Cretan origin. It seems to present the loftiest idea, the all-embracing love of motherhood.

The example shown from Ophel is made of the coarse, gritty porridge-ware, generally identified with the uncleaned clay used by the cave-dweller. It is full of chips of quartz and flint, one chip actually measuring  $\frac{1}{4}$  inch long,  $\frac{1}{4}$  inch broad, and  $\frac{1}{8}$  inch thick. The neck is short and thick. The side view shows the careful moulding of the back. The head is a mere knob of clay, pinched neatly by finger and thumb to show the nose.

The features had been painted in black or brown as on the Cretan idols which resemble it, and the whole had been covered over with a coat of lime or whitewash of some sort. The lower part of the figure is, unfortunately, lost.

On Fig. 14 are shown the long necks and bird-face heads of figurines, the bodies of which had been lost. Of these I found considerable numbers on Ophel. They seem to have belonged to idols of the type common in Crete and the islands of the Ægean Sea, some examples of which are reproduced here for comparison.

This bird-beak figure with very long neck and bulging eyes, of which I found so many fragmentary specimens on Ophel, was found also at Tell-ej-Judeideh (*E.P.* 67, 9) and at Gerar. The nose is made by simply pinching the soft clay between finger and thumb, and small round bosses of clay are added for eyes. This example (*E.P.* 67, 9) seems to have fitted into a socket, or into the rest of the figure which is lost. No complete specimen has yet been found. It seems to be of early date; but it is doubtful if it is connected with the Astarte worship. These bird-beak figures seem to be of Cretan origin.

For the same long necks in Hittite figurines of deities from Syria and Smyrna, see Hogarth, *Hittite Seals*, p. 58, Fig. 85.

7. The Astarte figures from Ta'anach are both unique in some ways. Both are steatopygous figures, and in the figure with the ear-rings the hips are specially pronounced. In the foreign civilisation at Naqada, Upper Egypt, I found several female seated figurines which are pronouncedly steatopygous<sup>1</sup> and of which no satisfactory explanation has yet been found.

<sup>1</sup> Similar figurines with bird-face and long neck have been found (1930) at Tell Halaf, Mesopotamia; and at Vinca near Belgrade. The former are supposed to be pre-Sumerian and the latter are pre-historic.

If this civilisation is, as we have suggested, kindred to the Amorite civilisation of Palestine, these figurines at Naqada may be an early form of the goddess mother.

The figure with ear-rings from Ta'anach is noteworthy also for the position of the arms, the pinched bird-like face, and the eyes made of discs of clay which had been suitably coloured. These eyes are the same type as found on the Astarte of the shrine from Bethshan described later.

The same face and disc eyes appear on *Hittite* figurines; of deities from Syria and Smyrna (H., *H.S.*, p. 58, Fig. 85) and the figure seated in the model chariot dating 950-800 B.C., found at Gerar, has the same eyes and features as this figurine from Ta'anach.

The Ta'anach figurine with ear-rings is identical with a figure which I have shown from Cyprus (Fig. 13) taken from Contenau, *D.N.B.*, Fig. 78. This type, of which at least three were found at Ta'anach, appears therefore to be *Ægean* in origin. The Cypriote figure, however, holds a dove on her left arm, as in the Bethshan shrine. The Astarte of the Bethshan shrine is otherwise different. This figure appears to have no head-dress, but the other figure from Ta'anach has the Hathor wig converted into two hooks. The parting of the hair has vanished. She holds a disc in her hands, which represents a cake offered to the Queen of Heaven, and she wears a broad necklace modelled in clay. This figure somewhat resembles *Gezer* 220, 11, and probably dates about the same period, the seventh century B.C. The other Ta'anach figurine seems to be a much earlier type.

Samaria and Jericho have contributed nothing to the subject, and Tell-el-Hesi (*M.M.C.* 61, Fig. 105) only one plaque showing the goddess with arms V-shaped and hands holding lotus buds.

In the four sites published in *E.P.* some interesting examples were found. These are practically all hand-modelled. One figure (Pl. 67, 2) is really the lid of an Astartoid jar. It has a "seal-like head and arms like fins." It resembles the bird-beak face of early Canaanite or Cretan figures. This one comes from Tell-es-Safi. It has three vertical and three horizontal lines in dark red on the back, red stripes on arms, probably representing bracelets, one stripe round the lower neck, and the eyes are red dots, having probably had a black spot in the centre. It is hand-modelled. Compare the bird-beak, Gerar, Pl. 36, 16, dating 800 B.C.



8. **BALD HEAD ASTARTE** (*E.P.* 67, 4).—Another example from Safi (Gath) is a figurine whose head and face with bulging cheeks and round eyes remind us of the well-known wooden statue of the Egyptian scribe. The eyebrows are indicated by sloping incised lines, the eyes are narrow slits with round projecting eyeballs, cheeks and breasts protrude, and traces of red colouring are visible on throat and back. The figure is hand-modelled, and was found with very early Canaanite painted pottery. It dates about the fifteenth century B.C.

Another figure of the same type, but on a plaque, was found at Gezer (*G.* 26, 8) in Cave 15, IV, with the arms crossed under the breasts and a much more solemn expression on the face! In both the ears are exaggerated. This was cast from a mould. Both seem to date about the fifteenth century B.C., and both are conspicuous by the absence of a wig or any head-dress whatever. Both are bald-headed. See also the Astarte shrine from Bethshan.

Another from Gezer (221, 20) is the same type, but has a wig apparently blocked out in squares. Similar bald-headed figurines are found in Hittite remains.

9. *E.P.* 67, 6, is regarded as a crude figure. Actually, it looks like the upper part of a crude Celtic cross, with a cup-hollow at the centre of the crossing of the arms, and three small dots in triangular form at the top. These three dots are supposed to represent eyes and nose. The figure is of clay and hand-made. It may be some sort of cult object, but it seems unnecessary to regard it as an attempt at a figure. There is no explanation offered as to why only one breast is represented and no mouth, nor whether these are hollows or bosses (See Vincent, *Can.*, Pl. III, 1, and Fig. 14, 6 *S.* above).

10. **CONICAL**.—At Judeideh two were found with conical head-dress above the wig (*E.P.* 68, 8, 10). A bone figure of a Syrian deity from Bethpelet shows the same head-dress.

One figure from Gezer (221, 21) has a head-dress slightly resembling this pointed cap, but flatter. The same conical cap occurs on Hittite figurines of deities—see H., *H.S.*, Fig. 85, p. 58. This headdress shows Assyrian influence.

That these Astarte figures were the Teraphim or household gods, referred to in the Old Testament, seems undoubted: but in 1 Samuel xix. 13, where Michal places the Teraphim in David's bed, is taken to imply that these "household gods"

might be statues of life size, we have as yet found no such example. It is quite possible that they may have been made life size, as Isaiah xl. 20 may appear to suggest, but, in that case, they must have been of wood, for Michal could not very easily have handled large images of stone, or even of terra-cotta!

On the Baal-worship so often associated with the worship of Astarte, in the Old Testament, Palestinian archæology has as yet thrown no definite light. It may be that the materials are already in our hands, though we cannot read them. The association of standing-stones with cup-hollows may prove to be the associated cults of Baal and Astarte; but, so far, there is no evidence to prove this.

The worship of Astarte was brought into Palestine by the Amorites prior to 2000 B.C. The Babylonian goddess Ishtar and the Egyptian Hathor both contributed to the Canaanite idea of the mother-goddess; but there is no doubt that Crete and the islands of the sea have also contributed. The nude female deity appears also on Hittite seals. On one seal the figure stands on a bull, has a bird-beak face or bird head complete, is steatopygous, and holds the opposite corners of her mantle in her hands. The figure is carved in Egyptian perspective—*i.e.*, head and legs in profile, trunk front view.<sup>1</sup>

The Astarte cult in Palestine is thus a conglomerate, including Amorite, Hittite, Babylonian, Ægean, and Egyptian elements.

II. LIMESTONE FIGURES.—Rudely carved pieces of limestone such as are shown in G. II, 421, seem to represent a human figure, but cannot all be classed with the figures of Astarte. There is no evidence even for regarding some of these as cult objects. The figure was found in Cave 2, I (the crematorium) at Gezer, and may be a cave-dweller cult object.

In such examples, however, as Plate 222, 2, from Gezer, where hands and arms, navel, breasts, eyes, nose, and mouth are depicted, it cannot be disputed that it is the same figure as found modelled in clay and represents the same goddess, though rudely worked. On the same plate, Fig. 5 has a rude face on the front and head-dress outlined on the back. In another, the only details are two eyes and the lower hem of a robe (222, 8); while another (Fig. 25) has two eyes and two legs suggested. These are of the Hebrew period; but one (222, 9) with a complete face was found in the second stratum and would thus date as early as prior to 2000 B.C.

<sup>1</sup> See Coutenau La, *D.N.B.*, Fig. 86.

Other examples shown on *Gezer*, Pl. 223, leave it quite clear that the same goddess was represented on limestone as on the clay plaques and from quite as early a date, perhaps even an earlier date.

One of these (Fig. 8) is a figure seated or throned and resembles Egyptian statuary in this, though not in skill. Most of these examples in limestone show the same features and details as are depicted on the plaques and pedestal figures.

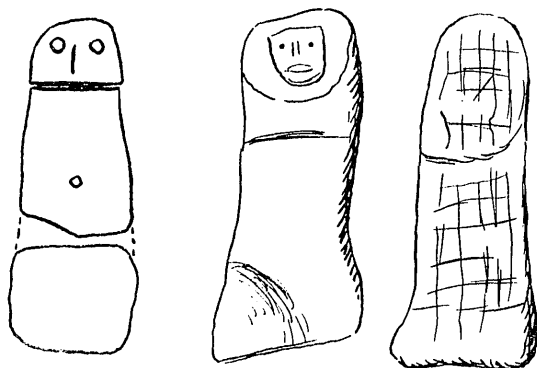


FIG. 15.—LIMESTONE FIGURES.

12. GAMING PLAQUES.—The Gezer plaque, shown by Vincent (*Can.*, Pl. 3, 2) as an Astarte cult object, and so regarded by Macalister, seems really to have been used for some other purpose, such as in some game. One exactly similar has been found by Petrie at Gerar (Pl. 39, 22), dating about 1400 B.C. Both plaques had peg-holes for small pegs used in a game, and two large holes for pegging them to the wall.

It is possible that G. 223, 1, is a smaller example in limestone. Examples of these plaques from various sites in Egypt, from Gezer and from Susa are collected by Sir Flinders Petrie in *Sedment I*, Plate 22, *q.v.* There is little doubt as to their purpose. They are not cult objects.

#### OTHER CULT OBJECTS OR TERRA-COTTA FIGURES FROM ANCIENT ZION

Besides the numberless fragments of Astarte figurines I found on Ophel a great number of fragments of other small figures—heads, legs, torsi, long snouted heads with protruding

disc-eyes suggesting the long neck and head of a giraffe, and models of camels or horses with saddle.

One seems to be a bull's head and slightly resembles such figures from Knossos (see *Alt. Kreta*, No. 80).

Two have the long snout and long neck referred to and seem also to show Cretan influence.

Of three it is difficult to say what they had been, especially one with protruding eyes.

Four were bird-face figures with long necks, such as occur also in Crete.

Two appear to be heads of bulls.

Six belong to figures similar to the three above.

Another is carved in limestone and resembles what is by some regarded as the god Moloch. It is a head and neck on a pedestal.

One fine specimen is a terra-cotta head of a lion and is of much later date than the other figures.

A common figure resembles a sheep but is really a horse, and is often found with a rider on its back as at Bethshemesh.

A small example of the same has a saddle.

The legs of these horses were found in great numbers.

A terra-cotta head of a lady, showing Egyptian influence and dating probably about 600 B.C. belongs to an Astarte pedestal figure.

Another is the head of a lady of the late Greek or Roman period. Many of the figures above described resemble those recently found at Tell Halaf in Mesopotamia.

### OTHER CULT OBJECTS

ALTARS.—Of altars we have spoken already in dealing with high places, and we found there that on emergency, any unhewn block might be consecrated on the spot and used as an altar, while at high places, recognised as regular places of sacrifice, fixed altars were provided. These were either part of the solid rock or rough blocks untooled, put in the position required. The evidence for this rests on the association of these altars with cup-hollows, pillars, and bones of animals near them. At Judeideh a rock surface slab with twenty-five cup-hollows was probably a fixed altar (*Exod. xx. 25*, "undressed stone," see p. 50 above). These altars were used for burnt sacrifices or for liquid offerings of blood and wine and water. In libation sacrifices cup-hollows were associated with the altars.

Of the altars above described, the supposed altar of the *high place on Ophel* is an example of an altar cut in the rock surface, and therefore a fixture. In the *temple at Megiddo* the altar was a slab of stone fixed into the wall. On the platform in front of it was a cup-hollow cut in a stone, but all around

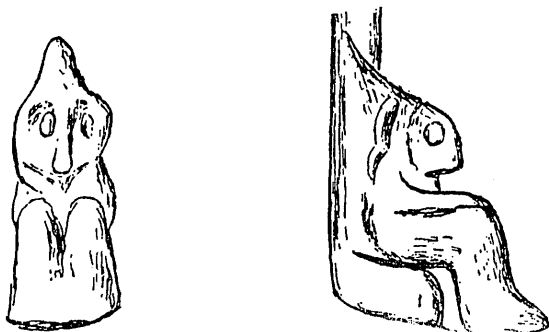
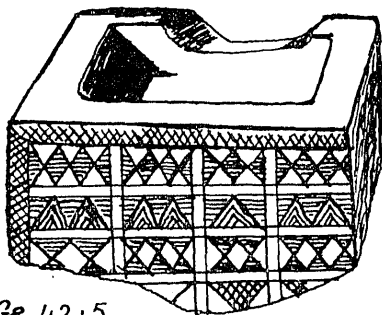


FIG. 16.—DETAILS OF SHRINE AT GEZER.

the layer of burned debris suggested burnt sacrifices, not libations.

The *stone of sacrifice* in the *high place cave at Gezer*, with the skeleton of an infant on it, was an ordinary slab undressed, and may not have been a fixed altar. The *square block* with the



GR. 42.5.

FIG. 17.—ALTAR WITH GEOMETRIC PATTERN.

square hole cut in it, found near the standing-stones in Gezer high place, was probably not an altar.

The *altar of the high place at Petra* is cut out of the solid rock and is an elaborate example of much later date, probably second to first century B.C.

Those at Ophel and Gezer are early Canaanite examples. The altar at Megiddo temple is of the Hebrew period.

At Bethshan in the south temple of Thothmes III (about fourteenth century B.C.) a conical libation altar was found in the south corridor—*i.e.*, outside the real adytum—with an artificial cup-hollow sunk in the debris of the floor to collect the libations, and *from Bethshan also* came the fine basalt panelled altar with the Cretan cross carved on its surface.<sup>1</sup> The arms of the cross end in round knobs, which is a Cretan form, and this altar probably belongs to the Philistine occupation of Bethshan after the Battle of Gilboa (twelfth century B.C.). A somewhat similar altar was found at Gezer and is shown on G. II, 424. This was a fixed altar.

EXTEMPORISED ALTARS.—There is no doubt that flat rock surfaces, with or without cup-hollows, were very commonly used as extemporised altars. Instances of such extempore sacrifices are not infrequent in the Old Testament. Two notable examples are Judges vi. 20 and xiii. 19-20, where, in the cases of an angel's visit to Gideon and Manoah the rock surface close by was temporarily converted into an altar and the meal became a burnt sacrifice.

Such rock surfaces with cups as that found at Tell-ej-Judeideh, and on hill-tops throughout the country, open to the sky, may be just such as were used in these two examples quoted.

The sacrifice of Elijah on Mount Carmel (1 Kings xviii.) was probably offered on such a rock surface, but here (v. 35) the altar is specially mentioned as well as "*the channel*," so that this was probably a recognised high place in constant use. Such "*channels*" as have been found on high places connected the altar with cup-hollows or an underground cave. What "*the channel*" particularly means in this context (1 Kings xviii. 35), or how the filling it with water would affect the burning, is not clear.

#### FAMILY WORSHIP

PORTABLE ALTARS AND TABLES OF OFFERINGS.—Small portable incense altars are quite common. We found several on Ophel. Several were found at Gezer (Pl. 224) and Gerar (Pl. 42, 5, 6). These are square or oblong in shape.

They appear as early as 2000 B.C., and are found in every

<sup>1</sup> See Southern Temple of Bethshan.

stratum practically down to the Hellenistic period (100 B.C.). About the seventh century B.C. these incense altars become very common. Several from Gerar are decorated with incised geometrical patterns, triangles and rhombi shaded and unshaded, well drawn. Others are roughly done (*Gr.* 41, 11, 16). Others are decorated with animal figures or with trees beside a cistern mouth, enclosed in a frame of geometrical design (*Gr.*, Pl. 40). These measure roughly about 3 inches square and  $2\frac{1}{2}$  to 3 inches deep. They are cut in soft white limestone, some being cubes and some oblong. The seventh century

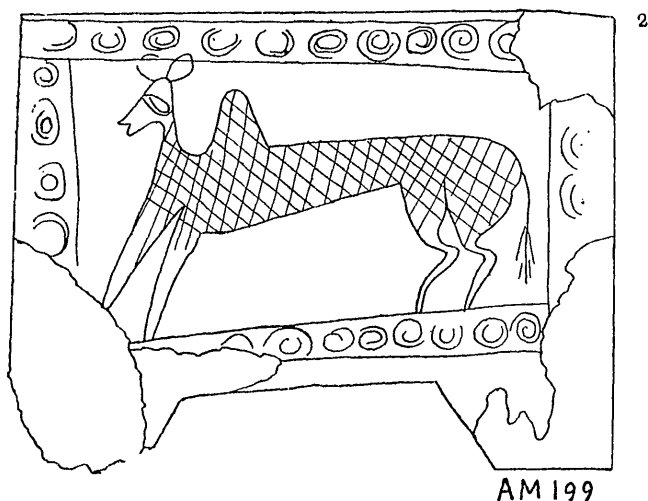


FIG. 18.—INCENSE ALTAR—GERAR ; HUMPED OX.

seems to have been the period when they were most in vogue, and by 500 B.C. they become much less common.

*Assyrian Origin.*—These small altars are common in Assyria and were probably brought into Palestine during the Assyrian invasions from the ninth century downwards. The oldest forms at Gerar are those with the geometrical designs. Next come the animal figure designs, and then again a return to the badly executed geometrical designs, which are the latest.

The figures depicted on these are humped animals, probably humped oxen, an animal like a horse, with elongated body and a bird's head. This figure resembles that on a panel painting of the III Bronze Age, where the body is much the same, but

the head is different. These may be of Cretan origin. The humped ox is Central Asian.

Pairs of oryx and of ibex are also drawn on three (*Gr.* 40, 5, 6, and 8). The same decorations appear on those found at Gezer (*G.* II, 442, Figs. 524-526). Concentric circles are found also on Ophel and Gezer specimens (*G.*, Pl. 224).

A fine example of the geometrical design was found in Tomb 147 at Gezer (*G.* I, 358, Fig. 185). This incense-box or portable altar is almost complete. *Gerar* XLII, 5, is similar in decoration and shape. It is 6 inches square by  $1\frac{3}{4}$  inches deep, and appears to belong to the Byzantine period (350-600 A.D.), but is really a relic of earlier occupation of the tomb,

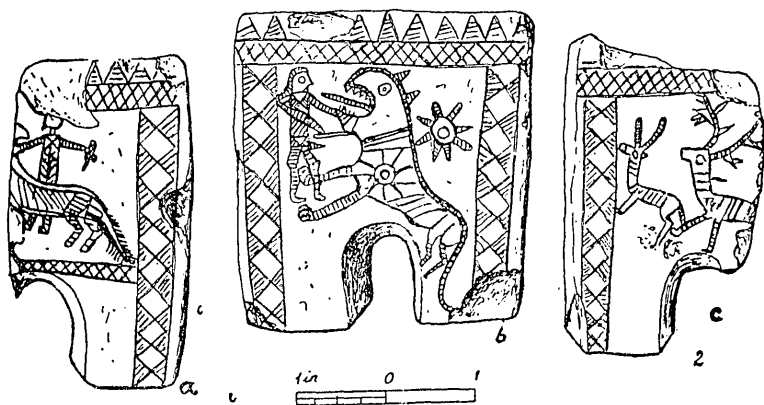


FIG. 19.—INCENSE ALTARS—GEZER.

dating about the seventh century B.C. These have all a hollow in the top for burning incense.

Of the fifteen specimens from Gezer, three, which appear to be of much smaller size than the others, are dated 1800-1400 B.C.<sup>1</sup> (*G.* 224, 2, 9, 14); two are dated 1400-1000 (*G.* 224, 3, 6); three are assigned to the early Hebrew period, 1000-600 (*G.* 224, 1, 4, 7); and the remaining seven to the Hellenistic period (600-100).

Among these there is not a single specimen of the type found on Ophel and at Gerar. They are mostly flat slabs of soft limestone 9 to 7 inches or less in length and  $2\frac{1}{2}$  inches thick, with oblong or circular cups about  $1\frac{1}{2}$  inches deep cut

<sup>1</sup> *G.* II, 425, Plate 224, 2, 9, 14; 3, 6; 1, 4, 7.



on the flat surface, which are frequently connected by channels. They closely resemble the limestone tables of offerings of the Ptolemaic period which I found in Goshen.<sup>1</sup> Two of these had a channel running round the edge, resembling one from Gezer of the Hellenistic period (*G.* 224, 15).

These fifteen from Gezer resemble nothing so much as miniature presses, as M. suggests, and he thinks they may have been specially so designed for the offering of the firstfruits of the harvest. There is nothing to distinguish in them between the early types and the latest forms. They seem to vary only in depth, or form of well and thickness of slab. All are of soft white limestone except one (*G.* 224, 12), which is of hard red limestone and showed better work. It was only  $4\frac{1}{2}$  inches square and  $\frac{7}{8}$  inch thick, with five shallow round cups arranged as a quincunx on its surface and measuring  $1\frac{1}{2}$  inches in diameter. I found a similar fragment with the same depressions and finish on Ophel, but what purpose these served it is impossible to say. These were probably lamps, like cressets in Scotland.<sup>2</sup>

These two belong to the Hellenistic period, 550-100 B.C. Of the oblong or cuboid shape several were found at Gezer, decorated with trees, human figures, lion, gazelles, other animals, and the same geometrical pattern border as found at Gerar (*G.* II, 442 ff.).

INCENSE.—In a house of about 1000 B.C. at Gezer a jar was found containing what seemed to be an "ochreous yellow sand." When this was exposed to the sun, it became a treacly mass. Analysis proved it to be some sort of incense or resin, from cone-bearing trees, which had been probably used in religious rites (*G.* II, 425).

For the use of incense in the O.T. see Ezekiel viii. 11, and 2 Kings xxiii. 5, "incense burnt to Baal, the sun, moon, planets, and all the host of heaven."

These portable incense altars thus appear to have been in use among the Canaanites from at least 1800 and they continued throughout the Hebrew occupation. The latest examples found at Gerar date about 500, but at Gezer they date as late as 100 B.C.

The burning of incense appears therefore to have come into Palestine with the Amorites or Hittites.

<sup>1</sup> See *E.E.O.T.*, p. 135.

<sup>2</sup> For cresset of same quincunx, see *S.A. (Scot.) Proceedings*, 1925-26, p. 11, where an exactly similar slab from Kirkiner is shown.

THE INCENSE ALTAR FROM TA'ANACH, PROBABLY A BRAZIER.  
—This portable incense altar is made of pottery and measures 3 feet in height. It is shaped like a truncated pyramid, the wide part acting as base. The four sides at the base measure each 18 inches, and the cup-hollow on the top is 12 inches in diameter.

*Decoration.*—Down the two front sides are three animal figures with wings and human heads. Above Figs. 2 and 3 on each row is a lion with its fore-paws resting on the human head beneath it. There are thus ten figures in these two rows. The human faces are beardless, and the prominent noses suggest Greek influence (Driver). These figures may be sphinxes or cherubim, as Driver suggests.

At the bottom there is a sacred tree, and on the left front side a boy is holding a serpent with its open mouth pointed towards him. This association of a tree with two animals points to Cypriote or Assyrian or Egyptian influence,<sup>1</sup> and the boy with the serpent seems to closely resemble the Cypriote (Cretan?) beast-tamer.<sup>1</sup> On the whole, it seems as if Western influence is strongest in this vessel. It is hollow, and there are three small window-like slots, as if representing three storeys. If a fire were lit below it, these slots would help the draught; but this idea of Driver's seems unnecessary unless we regard it as a brazier, and not an altar, as is very likely. Incense would burn without a fire to heat it.

We have here got something closely resembling the Bethshan shrine of Astarte in some points. There are the human figures, the lions, the serpent and the "windows"; but there are additional symbols, and the whole suggests a new atmosphere.

This vessel is dated by Sellin at 700 B.C. This means that it is Hebrew, and belongs to the time of Hezekiah of Judah, or that of Pekah or Hoshea of Northern Israel.

Driver<sup>2</sup> suggests that such a "tannur" or oven may have suggested the "smoking-furnace" and the "lamp of fire" which symbolises the presence of Jehovah in Genesis xv. 17.

This "altar," however, is now by many regarded as a brazier.

POTTERY INCENSE-BURNERS: INCENSE-BURNER FROM GEZER.<sup>3</sup>  
—A similar incense altar or brazier about 8 inches high was found at Gezer. It had been broken, and part is lost. Its

<sup>1</sup> See Driver, *Sch. Lectures*, p. 85, footnote.

<sup>2</sup> *Id. loco.*

<sup>3</sup> *Q.S.*, 1908, p. 211.

shape is a truncated cone with a bell-shape base. It is decorated with bands of saw-teeth or triangles in alternate red and black, separated by a band of very close criss-cross pattern. It belongs to about the same period, 1000-600 B.C., and is Hebrew. The complete design is the stem of a lotus plant with one row of six pendent lotus leaves projecting outwards below the top. Both base and top are broken and lost.

MEGIDDO INCENSE ALTAR.<sup>1</sup>—A similar incense altar of Egyptian design was found at Megiddo. It has the cup-hollow at the top and a capital "consisting of two bands of pendent lotus-leaves." Another similar but smaller and less elaborate is shown from Ta'anach (Fig. 91) (see Plate facing this page).

*Sinai*.—Incense altars of sandstone from Serabit Sinai, are shown on Plate facing p. 101.

### SHRINES (G. II, Figs. 437, 517, 518)

A MINIATURE SHRINE OF 1800-1400 B.C.: THE GEZER SHRINE  
(See Plate facing p. 101)

At Gezer was found a fragment of what seems to have been a shrine of the period 1800-1400 B.C.

It is made of hard-baked pottery, and consists of a floor slab  $\frac{7}{8}$  inch thick which serves as an open forecourt (12 inches broad and  $4\frac{1}{4}$  inches deep). Behind this was the sanctum, which has almost completely disappeared. In the centre of its front wall had been a door (about 8 inches square), and at each end of this wall was a curious figure on a rude chair. Each wears a high conical cap. The nose overspreads most of the face. The eyes are circular pellets of clay, moulded and stuck on. The ears are enormous in proportion. The hands rest on the knees. The feet also appear to be detailed. About midway between each figure and the door are two tiny vats, merely semicircles against the wall (1 inch in diameter and  $1\frac{1}{4}$  inches high). These miniature vats may represent lavers for purification in a full-sized shrine. Of the size of the shrine or the image within, it is impossible to speak, so little is left. The nose, eyes, and ears of this figure are the same as found on the Astarte from Ta'anach (Fig. 13) with ear-rings, and on the figure seated in a chariot from Gerar. The cap appears to be Assyrian. This seems to be a shrine of Astarte.

<sup>1</sup> Vincent, *Canaan*, p. 181; *Q.S.*, 1908, p. 211.



INCENSE-ALTAR OR BRAZIER. TAANACH.

facing p. 100.

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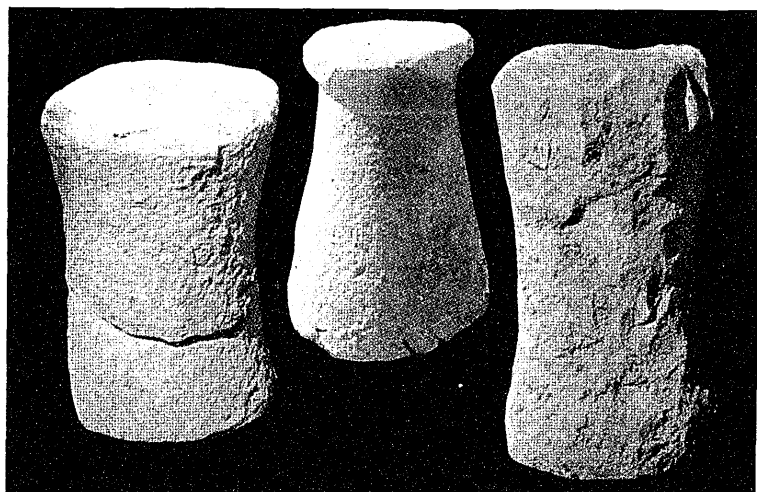
<sup>1</sup> Vincent, *Canaan*, p. 181; *Q.S.*, 1908, p. 211.



INCENSE ALTAR OR BRAZIER. TANNACH.



POTTERY SHRINE—GEZER.



INCENSE—ALTARS OF SANDSTONE SERABIT, SINAI.

facing p. 101.

## ASTARTE SHRINE FROM BEISAN: ASTARTE TEMPLE

Under this head falls to be described also the pottery cult object found at Beisan (in 1925) in a room outside the Canaanite temple of Astarte. This cult object consists of three stages or "flats" above each other, each consisting of a square or cubic chamber and each chamber, smaller than the one under it.

The lowest flat seems to have had two oblong apertures or "windows" on each side. The second above it had two on each of its opposite sides, the other sides being apparently decorated with moulded figures, one a lioness. In the uppermost "flat" there was a "window" on each side, and on the sill of one window sits a nude figure of the goddess Astarte, holding a dove in the hollow of each of the bent arms.<sup>1</sup> This figure has no head-dress, but is bald. The eyes are small circular discs of clay, with a dot in the centre, put on while the figure was soft, a form of eye used frequently on other Astarte figures, on birds, and on the doves which the goddess holds in her hands (see Figs 13 above). This bald head resembles that of Astarte figures, of which only two have been previously found in Palestine. One comes from Gezer (G. III, Pl. 26, 8) and one from Safi (Gath) (E.P., Pl. 67, 45). In both of these, the heads are of the same round shape and uncovered, but the eyes are slightly oval and the ears are exaggerated. They appear, however, to be the same type of Astarte figure, and belong to the same period. In the Beisan Astarte, also, the breasts do not seem to be indicated, as they are in the two other.

ASTARTE QEDESH WITH TAMMUZ AND RESEPH (*Ezek.* viii. 14).—There is considerable similarity (as Rowe points out) between this shrine of Astarte and the Egyptian stele No. 646 in the British Museum. On the latter, *Kenet*, identified with Qedesh, the Holy One, another name or form of Astarte, is represented standing on a lion. At Bethshan the lion or lioness is on the side of the shrine. On her right hand in the Egyptian stele is Tammuz (Adonis), and on her left, Reshpu or Reseph.

Rowe suggests that the two male figures on the Beisan shrine may represent these two deities, and the nude figure may be *Astarte-Qedesh*.

<sup>1</sup> For the dove, cf. *D.N.B.*, Fig. 78, from Cyprus, and Fig. 14 above



Both shrine and stele belong to the XIX Dynasty period (fourteenth century B.C.).

With this shrine and the Egyptian stele we may compare the limestone stele of Astarte in the museum at Acre, described below. Some of the Astarte figures found at Gerar appear also to be of the same type, having round heads and wearing no wig (see *Gr.*, Pls. 35 and 36).

Below the feet of this Astarte figure at Beisan, in each window of the middle flat, is the figure of a man, each man having the left hand on the other's head, with the right arm by his side. Close to the right foot of the left-hand male figure had been another dove, while the head of a snake, represented as crawling upwards from the right-hand window of the lowest flat, is just under his feet. On the right side of the middle flat, which has no aperture, is the modelled figure of a lioness with mouth open, represented as moving round towards the two men. The dove and serpent were both sacred to Astarte; and the part which both play in Hebrew religion may be another example of the adoption of Canaanite symbols,<sup>1</sup> or another evidence of the influence of the Canaanite religion upon the Israelites.

We have thus here three animals—the dove, the serpent, and the lion—associated with Astarte-worship (*cf.* the dove in Hebrew sacrifice, the lion of the tribe of Judah, and the serpent of Dan).

Another figurine<sup>2</sup> of Astarte, found at Beisan, is of the *plaque* form, with painted decoration suggestive of Cypriote influence. The head is missing, unfortunately. The arms are folded round the breasts, with the palms of the hands laid flat on the chest. The breasts and navel are emphasised, though not exaggerated, and there is a veil painted in lattice pattern down the back.

CONICAL "DOVE AND SERPENT" STAND.—Associated with this Astarte shrine was another cult object, in which both doves and serpents figure. It is one of several conical stands with a bell-shape base. Near its top are two loop-handles with clay-modelled bosses on the top of them. In its sides are slots cut like the openings in a dove-cot. Moulded figures of doves are represented inside, looking out at these slots, while two serpents crawling up the sides of the stand are apparently look-

<sup>1</sup> The poor man's offering, Lev. v. 7-11, xii. 6-8, xiv. 22-30.

<sup>2</sup> *Illus. London News*, November 12, 1927, p. 859.

ing in or kissing the doves. This, also, looks like a portable incense altar, or a stand for some such purpose.

**LIBATION VASE.**—From the room of the sacred pillar in the south temple of Thothmes III at Bethshan came also an unusual type of libation vase. These libation vases of plain ware and without handles are quite common from about 1300 B.C. to 600 B.C., and found in most sites. In appearance they look like somewhat large, even clumsy, drinking-cups. This specimen from Bethshan is not only painted, chiefly with plain bands round the base and upper part of the cup and bars on the handle, but it has also four rather clumsy loop-handles extending from halfway down the side of the cup to the junction of the pillar with the base. This cup belongs to the early fifteenth century B.C., and its position in the altar or pillar chamber confirms our idea that these cups were libation vases, or used for some religious purpose. These libation vases are found in Crete and the Ægean Islands with much more elaborate decoration. The Palestinian libation vase is therefore very probably Mycenæan in origin, or Cretan.

There is quite a possibility that these pedestal bowls may have been braziers for charcoal fires. They become very common from the fourteenth century, and specially so in the early Hebrew period, though usually quite unornamented.

#### OTHER CULT OBJECTS FROM BETHSHAN

In addition to the objects described above, *figurines of Astarte*; a pottery model of a pig painted; bull; elephant; dove with tail feathers in red paint; duck; the Egyptian god Bes; head of an Astarte with five plumes (*cf.* Ta'anach); mud models of "Cakes of the Queen of Heaven"; Bes drinking from a cup through a tube, on seals; and a model of a spherical cake inscribed in hieroglyphs, "DAILY OFFERING," were found belonging to the same period at Bethshan. This is a model of the cakes referred to in Jeremiah xlv. 19, in all probability.

These are more or less to be regarded as cult objects associated with the Canaanite religion in the fifteenth century B.C.

**DIVINATION.**—On a cylinder seal of the Amenophis III level (about 1400 B.C.) there is a cuneiform inscription which reads—

"Ma-a-nu-um, the Diviner,  
Servant of the God En-ki (Ea)."

On one side of the inscription is the figure of Ea, and on the other the figure of the diviner himself. This seal comes from Babylonia.

Diviners are referred to in the Old Testament in Isaiah viii. 19, xxix. 4, xlvii. 13, xlv. 25; Zechariah x. 2, etc.

Another object, a Hittite seal, has carved on it two deities, an elephant with a vulture above him and an ass (see *Pa. Mus. Jnl.*, June, 1928, p. 160).

**BULL'S AND ELEPHANT'S HEADS: RHYTONS OR LIBATION VESSELS.**—At Bethshan, in the stratum of the Amenophis III period (1411-1375 B.C.), a hollow cult object resembling a jug, about 9½ inches high, but with an open base, was found with a bull's head on the top. It is conical in shape, narrowing towards the head.

In the old Canaanite religion the bull was emblematic of the deity, and was also used in sacrifices, as seen from the remains of a sacrificed bull found in the temple of Thothmes III at Bethshan (*Mus. Jnl.*, Pl. 164, June, 1928). On a Hittite seal (Contenau, Fig. 86, p. 87) the nude figure of the bird-headed goddess stands on a bull.

Another remarkable cult object, but with the head of an elephant, was found in the same level. It is also a conical hollow vessel, the base of which has been lost. "The eyes and trunk are very realistically shown." Elephants were valued in Egypt at this period, and appear in lists of gifts from Upper Syria to Thothmes II. They are known to have existed in the Upper Euphrates district as well.

It seems that these vessels had been libation vases, though they appear to have been found without bases. They recall the lioness's head Rhyton from *Knossos*, or the bull Rhytons shown in Evans' *Knossos*,<sup>1</sup> and seem to show traces of Cretan influence.

#### LIMESTONE STELE

**THE ASTARTE STELE AT ACRE (HITHERTO UNPUBLISHED).**—In the collection of antiquities made by Mr. Lowick, Governor of Acre, there is a very interesting limestone stele, which is obviously connected with the Sidonian worship of Astarte.

This stele is about 4 feet high, 18-24 inches wide, and about 4 inches thick, though these measurements do not profess to

<sup>1</sup> E. *Knossos* II, 828, Fig. 542b; or the Bull "Rhytons," on p. 259, 260, and 263.

be accurate. Round the edge is a scallop border of isosceles triangles, with the apices pointing outwards, the triangles and the intervening spaces each containing one circular boss or disc, all in low relief. Near the top, three figures are similarly carved. The figure to the left is probably the Egyptian goddess Hathor, that in the centre is Astarte, and the one on the extreme right is a male deity, probably Baal, or perhaps Tammuz or Reseph. If the left figure is a male it is probably Tammuz, as on the Bethshan shrine.

All three figures are nude. Each has the hands raised so as to form a circle over the head, and in each case the perspective of the drawing is Egyptian. The body is shown in front view down to the hips. The legs and feet are shown in side view, as in the plaques from Gezer.

Between the left figure and Astarte is an oblong boss, with two horizontal incised lines crossing two vertical incised lines, forming one complete square in the centre and eight incomplete round the outside edges. Between Astarte and the male figure on the right is a square boss with two deeply incised lines crossing at right angles and parallel to the sides. These undoubtedly are symbols the meaning of which is not yet known. They may represent cakes of offering.

Just below these deities are two lions—a lion on the right, and on the left a lioness. Both are slightly raised on their hind-legs, facing each other, and both have the tail raised, though not curled right up the back as in the lion slab at Tiberias.<sup>1</sup> The lioness shows the right eye slightly exaggerated. The eye consists of two concentric circles, which are so accurate as to suggest the use of a compass or a substitute for it, with a dark dot in the centre for pupil. In the lion the eye is obliterated.

Below the lion the face of the stele is decorated with six-leaf rosettes, the tips of the leaves being joined and the intervening spaces filled in each rosette with six small bosses similar to those in the border.

This stele has been regarded by some as Hittite work, while others pronounce the decoration Arab. Others, again, consider it belongs to the Byzantine period, and regard it as a crude attempt to reproduce Daniel in the den of lions, a theory which cannot be entertained.

<sup>1</sup> This "lion slab" is now built into the wall of a portico in front of the hotel at Tiberias.

The carving is by no means artistic or well finished. It is not a great work of art by any means, but it is unique of its kind. If more were known of the place and surroundings in which it was found, one could speak with more confidence. Unfortunately, it had been found by Arabs and secured from them by Mr. Lowick. There is little doubt, however, that it is connected with the Sidonian worship of Astarte.

The eyes in the two "female" figures are obliterated, but the eyes of the male deity are represented by protruding circular discs, exactly as in the Astarte and the two male figures and the lioness of the shrine of Astarte found at Bethshan, which belongs to the period 1300-1200 B.C. The eyes of the lion and lioness on this stele at Acre are also similarly represented. So far as the figures are concerned, the stele seems to me to belong to the same period, as the shrine of Astarte from Bethshan.

Whether it is correct to say that the decoration of the stele is Arab, is very doubtful.

There is no emphasis of the attributes of motherhood in either of these two female figures. The breasts are indicated but not exaggerated, and there is no doubt that the eyes in all three figures were represented exactly as on the figures of the Bethshan Astarte shrine.

The stele may have been the side pillar of some votive shrine, the other side pillar and the top having been lost; more likely it is simply a votive tablet, but there is no inscription. It is of soft limestone. The carving is all in low relief, so that the surface of the figures is level with the face of the stele. I feel convinced that here we have the same deities, two male and one female, as on the Bethshan stele, and it belongs to the same period. It may, in fact, have come from Bethshan.<sup>1</sup>

THE CARVED LIONS OF TIBERIAS.—In view of the fact that the lion is associated with the worship of Astarte, these carvings assume a deeper interest and importance.

Into the wall of a house on a side street of the modern Tiberias there is built an ancient lintel of a massive door. On this lintel are carved the figures of four lions—a full-grown lion at each end, a lion and lioness probably, with two cubs between them. These figures are carved in high relief on hard limestone. The work seems to be original,

<sup>1</sup> See *P.E.F. Q.S.*, January, 1926, Duncan.

and is very generally regarded as Hittite. It is supposed to have come from the palace of Herod, at Tiberias, who had found this ancient carving and refused it. The carving is crude and primitive, but in some points it is superior to that of the Acre stele, and the outline more closely resembles the lioness of the Astarte shrine from Bethshan.

The other lions at Tiberias are on two large slabs of limestone, now built into the front of the portico of the modern hotel. These two lion slabs are said to have come from a cave on the hill-slope, just on the eastern edge of the valley, where the Via Maris leaves the western edge of the Sea of Tiberias, near the modern village of Magdala. The Via Maris is the recognised route of Assyrian entrance into western Palestine.

The lions carved on these slabs are distinctly of Assyrian type, and of much later date than the lintel described above. The tail is curled up the back. The animal has a shaggy mane. The legs are well shaped, and the details of the feet worked out. The eyes are oblique slots and the head is well carved. The workmanship shows skill very much superior to the lintel lions or to the Acre stele.

No link has been found, however, to connect them with the worship of Astarte, and if the statement of the locality where they were found be true, their chief value lies in proving that this route, which we have named the Via Maris, was actually the route by which the Assyrians entered Canaan in their invasions.

## SERPENT-WORSHIP

### SERPENT-GODDESS

The north temple of the Thothmes III period (about 1500-1450 B.C.) at Bethshan was dedicated to the serpent-goddess, and her worship continued through later periods. Serpent cult objects have been found in the next two strata covering the period 1450-1375 B.C.

Altogether, fifteen serpents were found. Of these, eleven are in an erect position, like the uræus, and set on a small stand. Two of these have human breasts with a milk-bowl below them. One has human breasts and another serpent round its neck.

The north temple has not yet been fully excavated, but it

is quite clear that, unlike the south temple, which was dedicated to the god Mekal, the north temple was dedicated to a goddess, and that goddess was the serpent-goddess. The number of serpent cult objects found in the Thothmes III and the next two levels confirms this.

It is possible that Bethshan means "the house of Shahan, Sakhan, or Shakhan," which is the Mesopotamian serpent deity. A deity named "Sha'an" is actually named in a Babylonian letter; and on a cylinder seal (Univ. Mus., Pa.) there is a *male* figure of this deity, who is named "Shakhan, son of Shamash (Sun-God)." The fact that so many of the serpents found at Bethshan have female breasts, however, leaves no doubt that the serpent deity at Bethshan was a goddess.

KIRJATH-SEPHER (TELL BEIT MIRSIM).—One of the most important recent discoveries in the excavation of Kirjath-Sepher is part of a limestone stele of the serpent-goddess of the ancient Canaanites belonging to the period 1800-1600 B.C.

The figure of the goddess, barefoot, and clad in a long dress reaching to the ankles, is preserved as far as the waist. A large, well-modelled serpent is coiled around her legs. This is the first object of the kind found in Palestine, and is regarded as the first native Canaanite representation of a deity yet discovered, apart from the Astarte figurines and similar objects. It corroborates Rowe's suppositions at Bethshan as to serpent-worship in Palestine in ancient times.

In the vessel found above the high place of Gath, what are described as "two small rude bird figures" are really "figures of serpents in uræus form" (Rowe) associated with a goose or swan.<sup>1</sup>

For the serpent in Scotland see the battle-stone of Mortlach, which has a Celtic cross between two fish-like monsters on one side, and on the other a bird, a serpent, and the skull of an ox.<sup>2</sup>

For the serpent in the Old Testament see 2 Kings xviii. 4. There, Hezekiah brake in pieces the brazen serpent of Moses, calling it "mere brass." Apparently the people included serpent-worship in their idolatry, and may have justified themselves by the traditional glory of Moses' brazen serpent, which was thus preserved in the Temple as a memento of a great deliverance.

<sup>1</sup> See *E.P.*, p. 98, Pl. 47; *Q.S.*, April, 1928, p. 110.

<sup>2</sup> *S.S.A. Proceedings*, 1925-26, p. 275.

A serpent of brass was found at Gezer in the high place area, and probably belongs to the same period as the Bethshan shrine, about fifteenth century B.C.

### CANAANITE TEMPLES AT BEISAN (BETHSHAN)

THE SOUTHERN TEMPLE OF THOTHMES III (SIXTEENTH CENTURY B.C.).—Only a brief magazine account of this temple has yet been published.

The walls of this temple are of unhewn stones, "covered as a rule with a single course of bricks." On the main walls there are low brick pedestals of various shapes, forming quite a new feature in Palestinian architecture. They may have been bases for the wooden pillars supporting a screen of wood, which enclosed the whole. These brick pedestals continue to appear down to the period of Amenophis III, but thereafter disappear (fifteenth to fourteenth centuries B.C.).

The temple includes altogether within its precincts seven chambers.

THE ADYTON : A PHILISTINE ALTAR.—In the inner sanctuary the most valuable find was the panelled altar of basalt, on the top of which is carved in high relief a cross with knob-ends. In Crete this cross is the sign of Divinity. This altar is new in Palestinian discoveries, and appears to be of Cretan origin. As the Philistines are now generally regarded as Cretans or of Cretan descent, there is nothing surprising in this. It may have been a Philistine altar therefore, a reminiscence of Gilboa and the capture of Bethshan (1 Sam. xxxi. 7); but in that case we should probably assume that it has gradually sunk down from its own stratum to that of Thothmes III,<sup>1</sup> unless the Philistines occupied Bethshan before his time and had been driven out by Joshua or Saul.

The only other *cult object* found was the upper part of a cylindrical object which terminated in a *pig's head*. A Canaanite lamp, two Cypriote gold pins, and a steatite mould with concentric circles for making jewellery, were among the other discoveries.

This temple confirms our idea that the inner sanctuary was reserved for priests only, since provision was made presumably for the laity making offerings in an adjacent and outer room.

<sup>1</sup> The Philistines are not usually dated earlier than 1300 B.C. This is based on discoveries elsewhere.



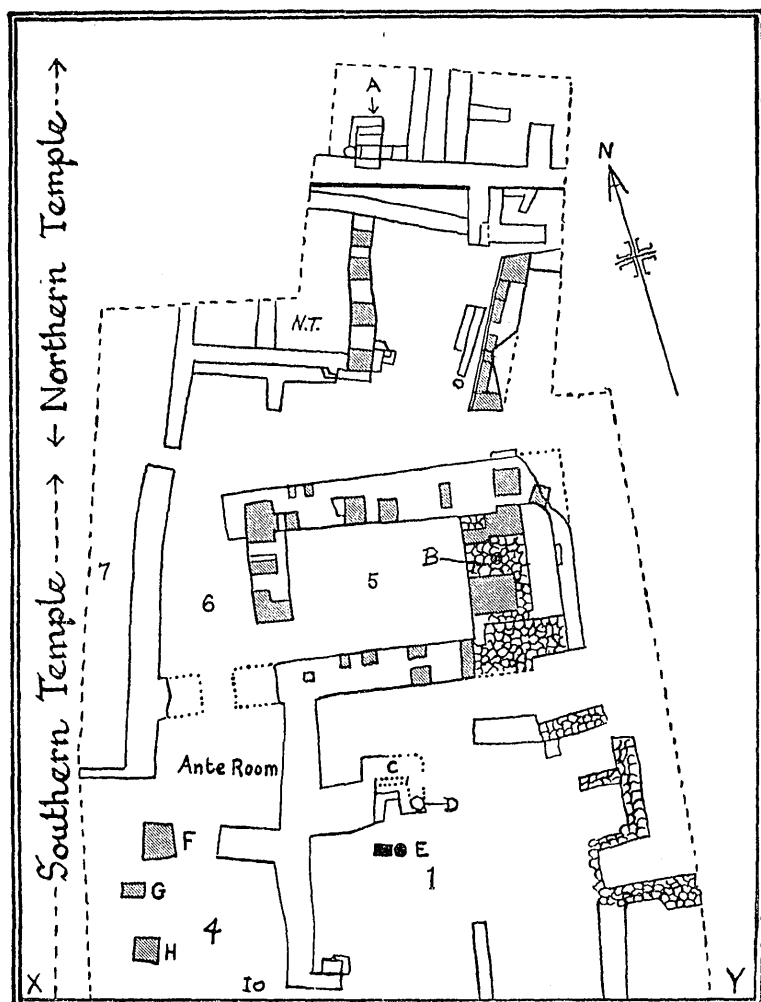


FIG. 20.—TEMPLES OF THOTHMES III, BEISAN, 1927.

For explanation of markings see page 112.

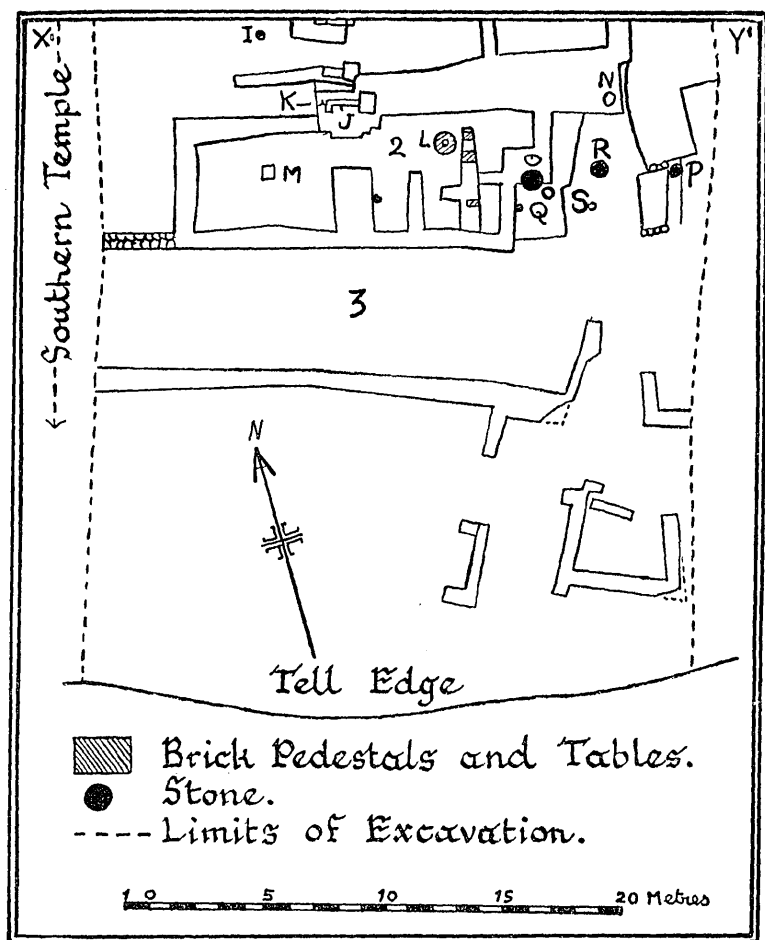


FIG. 21.—TEMPLES OF THOTHMES III.

This plan is a continuation of the one on the opposite page, X' and Y' marking where this joins the other at X and Y. On the next page will be found an explanation of all the letters and numbers shown on these two pages.

## EXPLANATION OF THE PLAN OF TEMPLES OF THOTHMES III.

*Southern Temple of Thothmes III.*

1. Inner sanctuary with two altars.
2. Room with altar of sacrifice, etc.
3. Corridor leading east to room with sacred column.
4. Courtyard with tables and pole-socket.
5. Room north of inner sanctuary.
6. Corridor leading to northern temple.
7. Room (partly excavated) west of latter corridor.

*Northern Temple of Thothmes III.*

- N.T. Northern temple (not yet fully excavated).  
 A. Flight of steps leading to lower level.

*Southern Temple of Thothmes III.*

- B. Pole-socket.
- C. Brick altar for cult objects.
- D. Stone libation basin (for blood) on brick altar.
- E. Stone altar for meat offerings.
- F. Brick table for cutting up meat.
- G. Brick table for implements (?) for cutting up meat.
- H. Similar to F.
- I. Socket of pole for dressing carcases of sacrificed animals.
- J. Brick altar of sacrifice.
- K. Blood channel in altar. In its centre is indicated the hole for the tethering-peg of the animal.
- L. Clay socket for pot (?).
- M. Brick pedestal.
- N. Stone base for cult object (?).
- O. Stone base for cult object (?).
- P. Stone base for cult object (?).
- Q. Stone base (?) for the stele of the god Mekal, which was found near by.
- R. Stone *mazzebah*, or sacred column emblematic of the temple deity.
- S. Stone bowl in floor in front of *mazzebah*. Both *mazzebah* and bowl are on a brick floor.

In a small room north of its southern corridor were found *in situ* a *massebah*, or sacred pillar, a conical stone, resting on a base of unhewn stones, all together being  $2\frac{1}{2}$  feet high (see R on plan).

About 45 inches from its base a basalt bowl (S on plan), which takes the place of a cup-hollow in a high place on the rock surface, was sunk in the floor, and a channel had doubtless led to it from the pillar.

The floor around was paved with brick. The bowl was obviously intended to collect liquid offerings, and this confirms our idea that many of the cup-hollows on the rock surface were intended for no other purpose. The blood or other liquid having been offered may have been of no further use, or it may; but this hollow was simply a refuse pit, intended to collect it, and prevent its smearing the whole place, just as pits were provided for the carcasses of animals slain in sacrifice.

Round the pillar at the north, east, and west were small stone bases (N, O, P) on which objects of worship or votive offerings, which have now disappeared, stood. Built into the west wall of the little chamber was a fourth stone base (Q), on which had perhaps stood the image of Mekal, the god of Bethshan, for near to it in the debris was found a stele to Mekal. The stele, being a votive offering to Mekal, would have been placed near to his image. Apparently, the pillar was enough for the Canaanite, but the Egyptian needed an image as well, as seen on this stele.

The whole southern temple really proves to be an adaptation and elaboration of a Canaanite high place; and this little room was probably the original Canaanite sanctuary, which usually consisted of "a crudely walled sanctuary, open to the sky," containing a sacred pillar with temple, altar, and cup-hollows.

In the corridor itself, near this chamber, was found the snout of a hippopotamus in pottery. The hippopotamus was associated with the Egyptian god *Set*, or *Sutekh*. A complete figurine was previously found in the Seti I level.

In the chamber north of the inner sanctuary was a *socket* for a *pole* (B) with traces of the pole itself. What the purpose of the pole was is not certain (see below).

#### THE STELE OF MEKAL

This stele is about 12 by 8 inches, and gives us the name of "Mekal or Mekar, the God of Bethshan."

On its upper half, the god is seated on a throne, holding in his left hand the "was" sceptre. He wears a conical head-gear, with two horns attached to the front. This helmet is Babylonian in appearance, and figures of Astarte occasionally wear it (see *E.P.*, Pl. 68, 8, 10). It closely resembles that worn by Sutekh, who also holds the "ankh" and "was" on a stele from Sinai, found by Petrie.<sup>1</sup> Two streamers hang down the back of the figure, one from the top and one from the base of the helmet, a feature of other Canaanite deities shown on Egyptian monuments. Mekal wears a very pointed beard, similar to that on Amorites or Libyans shown on Egyptian sculpture. Round his neck is a collar or necklace. Mekal is thus a distinctly Amorite type.

INSCRIPTION.—Above his head three columns of hieroglyphs read "Mekal, the God of Bethshan."

Facing him are two worshippers, each offering him a lotus-flower. Their names are Amen-em-apt, and Pa-ra-em-heb. The five columns of hieroglyphics above them read: "Made for (or in memory of) Amen-em-apt, by his son, Pa-ra-em-heb." The larger figure next the god is the father, and behind him the small figure is the son who has dedicated this stele in honour of his father to Mekal.

On the lower half of the stele the inscription reads: "A boon (gift) which the King gives to Mekal, the Great God, that he may give thee life, health, fresh provisions (?), favour, and love, that thou mayest proceed in peace to the place (which) thou reachest, as a revered one.

"For the Ka (soul) of the one favoured of his God, the builder Amen-em-apt, true of word. His son, Pa-ra-em-heb."

The stele was thus dedicated to Mekal, in honour of and for the soul's peace of his father, by Pa-ra-em-heb. The inscription seems to imply a life of progression in the future world with varying degrees of attainment.

The two figures are repeated opposite this inscription. With this inscription compare that on the sarcophagus of Akhiram (see Inscriptions).

#### IDENTIFICATION OF MEKAL<sup>2</sup>: IS HE MOLOCH?

1. In late Phœnician inscriptions there are references to a god Mekal or Reshep-Mekal, a name which in Greek becomes

<sup>1</sup> *Researches in Sinai*, p. 126, Fig. 134.

<sup>2</sup> Rowe, in *Museum Journal of Philadelphia*, June, 1928.

Apollo Amyclæus, identified with Apollo of Amyclæ in Lacedæmon. This may be the later survival of Mekal of Bethshan.

On a stele in Berlin Museum Resheph is dressed exactly as Mekal is on this stele—a conical cap with two streamers and two horns. He also holds the was sceptre in his left, and the ankh in his right hand; but this Resheph is usually identified with the Egyptian god Set or Sutekh. Thus Mekal may be a form of Reseph-Sutekh.

“Reseph” means “fiery darts, heat, pestilence.” Mekal may be from the root “akal,” to “devour,” and may mean the “Fiery Devourer” (2 Kings i. 14), with a reference to the great heat and trying climate of Bethshan.

2. Or Mekal may be simply a transposition of the letters of Melek, “King,” the same word as “Molech,” the Moabite god of devouring fire and pestilence (Jer. xxxii. 35).<sup>1</sup>

In the “temple of Dagon” (1 Chron. x. 10), which is the south temple of Rameses II uncovered at Bethshan in 1925, a cylinder seal was found with the figure of a god dressed like Reseph—viz., wearing a conical crown with two streamers and a gazelle’s head with horns attached to the crown. He holds a scimitar in his left, and the ankh, sign of life, in his right hand. This figure must be Mekal in the form of Reseph, so that the two seem to be identical.

#### SACRIFICE: THE SLAUGHTERING AND DRESSING OF ANIMALS

At Bethshan in the Amenophis III level (about 1400 B.C.), two rooms were found, east of his temple, each containing a *long clay pottery socket* for holding poles.

These poles and that in the courtyard of the Thothmes III temple were used probably for tying up the animals to be slaughtered, and afterwards for dressing the carcasses. The pole in the room next to the Amenophis III temple was vertical, and near its base was a circular pottery receptacle for the blood, all of which recalls the pole and pot depicted in the papyrus of Anhai in the British Museum.

The pole in the other room sloped at an angle of 31 degrees off the vertical, and had been used for smaller animals. Under it there was no pottery receptacle, but behind it a small, round basin, lined with brick. The animal, a sheep, for instance,

<sup>1</sup> Cf. 2 Kings xvii. 31, where the Adrammelech and Anammelech Cult seems to be a form of Moloch worship.

may have been bled to death over this basin and the pole used for dressing it afterwards.

From this we may infer that in open rock-surface high places some of the cup-hollows, especially the deeper and cylindrical types, were meant for poles, and that at least some of these poles were not imitation groves (Asheroth) but were intended for the purpose stated above. This may explain why we find such cup-hollows even where there was a natural grove.

### THE HOUSE OF ASHTAROTH AND THE TEMPLE OF DAGON

In the level of Rameses II (1292-1225 B.C.) at Bethshan two temples were found, one of which has been identified as the house of Ashtaroth (1 Sam. xxxi. 10) and the other as the temple of Dagon (1 Chron. x. 10). Compare Judges ii. 13.

The Astarte shrine from a room near this house of Ashtaroth is described above. These temples have not yet been described in full.

From this XIX Dynasty stratum of Rameses II at Bethshan came a stele of "Amen-em-apt, overseer of the double granary of the lord of the two lands (? Egypt and Palestine)<sup>1</sup> and overseer of the soldiers," also a portion of a statue of some important person.

### ASTARTE IN BASALT

The most valuable find, however, was a *basalt figure of Astarte, wearing a long dress* and the *conical head-dress* usual on all Syrian goddesses, with two plumes attached. In her left hand is the was sceptre and in her right the ankh, as we found in the case of Mekal, Sutekh, and Reseph.

She is, however, here named Antit (Anaitis) by the Egyptian who dedicated the monument; and Antit is usually represented seated on a throne with battle-axe in her left and a shield and spear in her right hand—the warlike side of Ishtar, perhaps.

Above this Astarte figure are written the words, "Anaitis, lady (Queen) of Heaven, mistress of all the Gods" (see Jer. xlv. 17). Anaitis and Astarte are one and the same, and the seated figurines referred to and illustrated above belong to this Anaitis phase of Astarte worship.

Other cult objects found in this Canaanite temple of the period of Rameses II of Egypt closely resemble those found

<sup>1</sup> "The Two Lands" are regarded as Upper and Lower Egypt, by A. S. Yahuda, etc.

in the temple of Ishtar at Assur, which dates about 3000 to 2000 B.C.

They establish the connection between the early religion of Palestine and that of Mesopotamia. Astarte is thus originally, to some extent, the Canaanite reproduction of the Assyrian Ishtar, in the phase of motherhood chiefly, the warlike side being usually omitted. In the Anaitis figure, however, the warlike feature is prominent. Most of the cult objects have been discussed elsewhere.

#### HEBREW TEMPLE OF ASTARTE AT MIZPAH (TELL-EN-NASBEH)

On the east side of the mound of Mizpah some forty yards north of the city wall a large square building was uncovered containing four chambers, arranged exactly like those of another Hebrew sanctuary found on the west side of the Tell in 1927. One room, 30 feet long and 8 feet wide, ran the whole width of the building. Three smaller rooms ran at right angles to it, of which the central room was larger than the other two. The building thus consisted of three chambers and a forecourt, exactly like that of the same period (XXII Dynasty—*e.g.*, 900-700 B.C.) found at Gerar. Here, however, there is no doubt that it was a temple, as the objects found in it prove. It contained a large artificial bin or pit over 6 feet in diameter, a stone bowl representing the cup-hollow of rock-surface sanctuaries, and a table made of two flat stones, which probably served as altar. The pit may be a corn-bin sunk into it at a later date. It is not likely to be a refuse pit within the precincts. A dove, the torso of an Astarte figurine, and a lamp nested in the three-branched fork of a tree, all of terracotta, were also found. In the near vicinity heads of Astarte figurines and a conical pillar or mazzebah were also picked up. There is no doubt, therefore, that this was a temple of Astarte of the Hebrew period. The other similar building on the west side may have been of earlier date, or a temple of some other deity; and we must assume that in Mizpah there were two temples in Hebrew times.

These two temples, along with that of Gerar and others similar, establish the fact that the kernel plan of the temple of these days consisted of three small chambers opening on to a forecourt running the whole breadth of the building. This temple at Mizpah cannot have been much larger than 30 feet square.



## JEHOVAH OR YAHVEH ON THE MONUMENTS

The name Yahveh, Jehovah, the God of Israel, is of infrequent occurrence on monuments. Naturally, the chief explanation of this is that we have as yet found no Hebrew inscriptions or written records where the name of Yahveh might be expected to occur. When Solomon built his temple, for example, it is very likely that there was an inscription of dedication on a stele or on the main entrance. If so, this has not yet been found.

The earliest mention of the name of Israel's God, Yahveh, is on the inscription of Mesha, King of Moab, dating about 900 B.C. There, as elsewhere referred to, he speaks of the arels of Yahveh. The language is practically the same as Hebrew. No steles or tablets dedicated to Yahveh have been found on any site so far. It appears, therefore, that the Hebrews did not adopt this custom of the nations around them.

On jar-handles dating from 600 down to 440 B.C., the Exilic period when there was no King of Judah and the government was a theocracy, we find the name Yahveh stamped in various forms. Sometimes there is simply the first letter Y deeply incised; sometimes YH, for Yah, which form occurs in the Old Testament. Usually, there are three letters, YHU, for Yahu, but the fourth letter H is never added.

These handles belong to jars of wine and oil which had been paid as revenue into the temple treasury, the name of Yahu signifying that Yahveh was now the head of the nation in place of the king. This is confirmed by the fact that so long as there was a king these jar-handles were inscribed "For the king."

Apart from these two instances there is no definite reference to, or mention of, Yahveh on any monument discovered in Palestine so far.

These and the Moabite stone are discussed under Inscriptions.

## RELIGION

Summing up, we find :

1. That the cave-dweller had some form of religion, but all we can say is that he worshipped an unknown god or gods—probably the gods of the lower world, the shades of his ancestors, whom he regarded as spirits or powers invisible

but still in their midst, taking an active interest in their life and actions, and whom it was necessary to propitiate. The ritual included liquid offerings of wine and blood as well as sacrifices of animals, and perhaps human beings.

Cup-hollows inside and outside caves, and perhaps stone altars, were associated with this ritual.

2. The Amorite introduced several new forms of religion :

(a) The pillar, which was the symbol of the dwelling-place of the deity. With it he associated also cup-hollows, borrowing them from the cave-dweller, perhaps, though not necessarily.

(b) The worship of Astarte in the form of small figurines of the mother-goddess—the Teraphim of the Old Testament—originally the *Ishtar of Babylonia*, later an imitation of the Egyptian goddess Hathor.

(c) In the later Amorite period we find the serpent-worship common : the worship of Tammuz, Reseph, Baal, Mekal, and Dagon.

(d) Sun-worship is also indicated by circles of pillars, as at Gath and Gezer.

Their ritual consisted of libations of wine, etc.; sacrifices where only blood, the life-principle, was offered; and burnt offerings. *Cakes* were offered to Astarte.

They built temples which included the “pillars” that represented deity, as well as images of Astarte and the gods of the later period; but originally they worshipped in the open, on the bare rock surface, and this practice continued even after temple enclosures were built, perhaps down to the period of the centralisation of worship at Jerusalem.

They used altars of unhewn stone, a suitable block, or a suitable projection on the rock surface.

For family worship they had small portable incense altars, shrines, images, and cult objects.

The ceremonial on its objectionable side is referred to in Isaiah lvii. 3-5.

Sacred or cult animals included the dove, serpent, lion, elephant, bull, pig, duck.

*Groves*.—All trace of groves has naturally disappeared.

3. The Hebrews adopted both the symbolism of Canaanite religion and the religion itself.

It may be that they endeavoured to superimpose the religion of Jehovah on that of the Canaanite by consecrating their

symbols to the worship of Jehovah—*e.g.*, at Ta'anach, Megiddo, and Gezer Amorite high places and sacred ground were enclosed in Hebrew temples. Ground that was sacred to the Canaanite was retained as sacred, and reused by the Hebrew.

This may indicate a policy of placation, or of incorporation of the Amorite religion; but such passages as Hosea iii. 4, Isaiah lvii. 3-5, etc., leave no doubt that with the symbolism the Hebrews adopted the religion too; and Deuteronomy xvi. 21-22 forbids the use of groves and pillars in the worship of Jehovah. Many other passages might be quoted to the same effect, so that the prophets' complaints and warnings unceasing were not without foundation.

That they worshipped Astarte, there is no doubt whatever. That they adopted also serpent-worship is indicated in 2 Kings xviii. 4, where Hezekiah destroys the images of Astarte, the groves, and the *brazen serpent* which Moses had made.

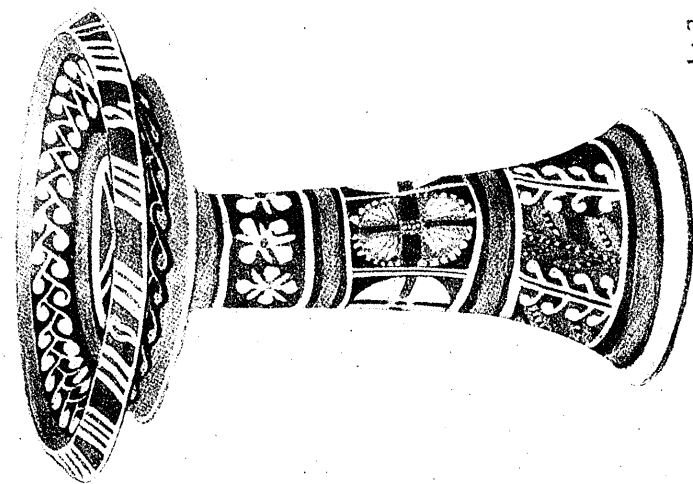
That at first also the pillar may have been more than a mere symbol of deity to the Hebrews, even the God Himself, is definitely asserted by Isaiah xix. 19, Hosea iii. 4; and there are many indications of sun-worship also among them (2 Kings xxiii. 5).

Jeremiah xlv. 17-19 leaves no doubt as to the hold which the worship of the Astarte, the Queen of Heaven, had upon Israel. There the women refuse to abandon the practices which had been followed by their ancestors in Judah for many generations (*cf.* Ezek. iv. 9) of offering drink-offerings and cakes and burning incense to the Queen of Heaven.

The symbols thus adopted by the Hebrews from Canaanite religion or used in common include: cup-hollows; pillars; incense altars; teraphim or figurines of Astarte; liquid offerings; sacrifices of animals, both blood and burned; cakes to Astarte.

Of the animals used in sacrifice by the Amorites, many were also used by the Hebrews in the worship of Jehovah.

Excavation thus amply attests the fact, so constantly reiterated in the Old Testament, that the greatest obstacle to Hebrew progress was their fatal gift of imitation, and the greatest hindrance to the advance of their own religion was the presence of the Canaanite in their midst.



1:3.

CRETAN BRAZIER OR LIBATION BOWL.  
(INCENSE-BURNER).



ASTARTE STÈLE.  
(ACRE MUSEUM)

facing p. 120.

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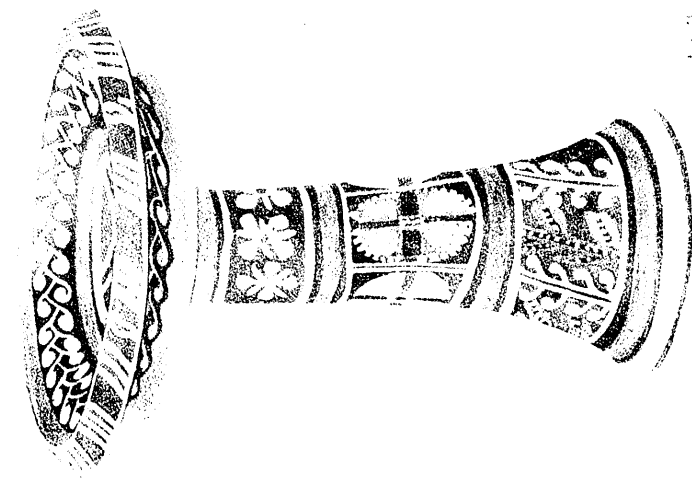
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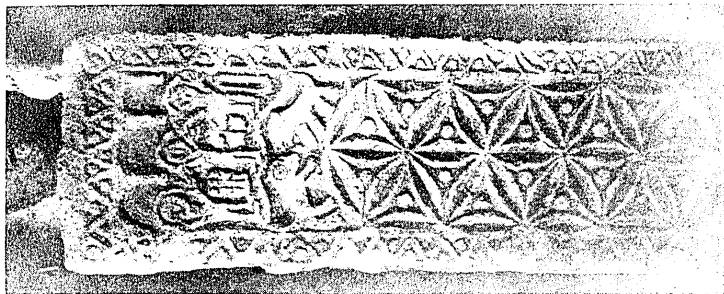
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142.

CRETAN BRAZIER OR TRIPOD BOWL.

(GEOGRAPHICAL).



ASIAE STEEL

(GEOGRAPHICAL)

Facing p. 125.



THE STELE OF MEKAL. BETHSHAN.

facing p. 121.

VII  
INSCRIPTIONS





THE STELE OF MEKAL, BETHSAN.

facing p. 101

VII  
INSCRIPTIONS



## INSCRIPTIONS

### STONES

#### MOABITE STONE : INSCRIPTION OF MESHA

THE history of this stone, and how narrowly the inscription escaped being lost, is already well known. It is a basalt stele set up in honour of the Moabite god Chemosh, by Mesha, King of Moab, in gratitude for the god's help in conquering his Israelite enemies and establishing the independence of Moab. The stele was found at Dibân in Moab in 1868.

Mesha's attitude to Chemosh and the language which he uses to express his dependence upon him, the god's personal interest in him and the directions he receives from him, might be described as Biblical. The vocabulary is practically Hebrew, and, generally speaking, it closely resembles the early narratives of the Old Testament. It reads like a chapter from Judges or Kings.

Full accounts of it with the translation may be found in the *Encyc. Bib.* (Mesha); *H.B.D.* "Moab;" Sayce's *H.C.M.*; Hogarth, *Authority and Archaeology*, p. 89 f.; *S.P.C.K. Texts*, No. 9; and elsewhere.

The inscription records first the erection of a high place to Chemosh, at a place named Qarkhah, which is probably Qir-Hareseth, modern Kerak. The oppressors of Moab complained of are Omri and his son Ahab, Kings of Northern Israel. From these two Chemosh gave him deliverance.

According to line 8, Omri held Medeba "all his days and half his son's days, forty years." In the Old Testament narrative, however (1 Kings xvi.), the two reigns covered exactly a period of forty years. There is here, therefore, a discrepancy with the Old Testament narrative, and Mesha's inscription would allow Ahab a reign of forty-four years, instead of the twenty-two years of 1 Kings xvi. 29. After forty years' tribute to North Israel, Medeba was delivered.

2. Mesha next continues his conquests northwards and takes *Ataroth*, which had been built for himself by the King

of Israel, presumably Omri or Ahab. The interesting point in this line 12 is his statement that after razing the city and slaying the inhabitants he "dragged the arel of Dodoh" from Ataroth, and placed it "before Chemosh in Keriyioth." Kerriyyoth is presumably the same place as Qarkhah, Qir-Hareseth or Dibon, Mesha's capital: but what the arel of Dodoh was is an unsolved problem. Driver translates it the "altar-hearth," which may mean the home altar for family worship, or the altar of the temple of Dodoh. That *Dodoh* was a deity seems likely—the protective deity of Ataroth—but the name is otherwise unknown.

AREL OR ARIEL.—The only probable solution of the meaning of arel has been suggested by Macalister. Among the ten standing-stones of the high place of Gezer, Pillar VII has a sort of sunk notch cut round it near one end, as if for dragging it by a rope. The curious fact is that this Pillar VII is of material different to all the other nine pillars and foreign to the district. Macalister, therefore, suggests that this Pillar VII had been the pillar or dwelling-place of the protective deity of a city (perhaps Jerusalem) conquered by Gezer, and that conquerors of cities were in the habit of thus robbing conquered towns of the protection of their gods, by dragging away the arel or pillar, or whatever it was that represented the presence of the deity. The translation of arel by altar or altar-hearth obviously implies the same idea.

In line 17 of the inscription some again read the word arel, this time in the plural, and translate it "the arels of Jehovah." Driver, however, reads the word differently here, and makes it mean "the vessels of Yhvh (*i.e.*, Jehovah)."

There is nothing unlikely, however, in reading the "arel of Yahveh" or Jehovah; for there is much evidence to show that in their own religion the Hebrews at this time made use of Canaanite symbols. If they did not try to Jehovahise the Canaanite religion, they allowed the Canaanite to give form and colour to their own religion. Under Religion we have noted several instances where Canaanite sacred places and symbols were retained and incorporated in Hebrew temples or places of worship. "The arel of Jehovah" would also be exactly the way in which a Moabite would speak of the symbol of Jehovah worship which he found in the town. The Philistines probably illustrated the same idea when they

carried away the Ark of the Covenant and thought they would thereby rob Israel of the protection of their God.

It seems, therefore, that to the Moabite the word "arel" meant the symbol of the presence of the protective deity of the town, whether an altar, a pillar, or an ark. The word occurs in the Old Testament—e.g., Ezekiel xliii. 15, written "ariel" and translated "altar."

If, however, the word "Dodoh" be taken as the name of a votary, the arel might well be a pillar, an altar, or a stele erected by Dodoh, in honour of the God of Ataroth, who in this case might be Jehovah, the God of Israel, though, since Ataroth was built by a King of Northern Israel, it might just as probably be Baal or Astarte.

3. Lines 24 and 25 are of interest as bearing on the subject of cisterns. Here it is implied that a public cistern "in the midst of the city," was the usual arrangement for water-supply; but, as there was no such public well in Korkhah, he commands each man to make a cistern in his own house. By this date, therefore, ninth century B.C., the method of collecting rain in the wet season and storing it in cisterns was a usual practice. We can have no hesitation, therefore, in accepting the practice as being general among the Hebrews, perhaps as early as the time of Solomon.

4. The use of prisoners of war for works of public utility is a practice of hoary antiquity, and here Mesha states that he used Israelite prisoners for the making of the "highway by the Arnon," as well as for rebuilding several towns that had been destroyed.

That no mention of the defeat of Israel by Mesha should occur in the Old Testament narrative is perhaps not surprising. There are other discrepancies with the Old Testament narrative which are discussed in the references given above.

5. Finally we note here the regular practice of appointing governors, or "kings," as they are named in the Old Testament, over the various towns in the kingdom. In line 28 Mesha claims that he reigned over 100 governors of cities which he had added to the land of Moab. This follows exactly the practice of the Canaanites all over Palestine. Each town had its own governor. The Old Testament is apt to convey the impression that these were independent "kings," and that the country was broken up into many independent districts. When Joshua arrived, however, the fact seems to

be that these governors were really commissioners responsible to headquarters. Where the Canaanite capital was located, the Old Testament does not say; but we know that Kadesh was the headquarters of the Amorites, and the Hittites captured it from them.

In the Old Testament the history of this rebellion of Moab is given in a single sentence in 2 Kings i. 1., repeated in iii. 5.

The characters of the writing are the same as occur on the Siloam inscription, early Phœnician. The inscription is assigned to the ninth century B.C.

In the O.T. (2 Kings iii. 4-5) Mesha is described as a sheep-master who paid tribute of 100,000 lambs and the same number of rams, with the wool to the King of Israel. Both here and in chapter i. 1 Mesha is mentioned simply as having rebelled after the death of Ahab.

#### THE SILOAM INSCRIPTION

This is perhaps the oldest Hebrew inscription which we possess. It is written in the square or printed characters of the Phœnician writing. The cursive script had not yet come in, or was not used for such purposes.

The inscription was carved on the south side of the tunnel made by Hezekiah, about 25 feet from the exit and about 5 feet above the bottom of the tunnel. It has been cut out and is now in the Museum of Constantinople. It records how the workmen worked from both ends of the tunnel, and met when they heard each other's voices through a natural fissure in the rock. It is a stele not cut by Hezekiah to record his feat of engineering, but more likely by one of the workmen.

The tunnel itself shows how the workmen passed each other, and how sometimes they lost their bearings, and nearly ran the tunnel to the outside face. This was a common mistake in cutting tunnels, as we saw in the case of the tunnel between the north and south suites of rooms, in Cave 28, II, at Gezer. By its various windings and sudden turns, the tunnel was made half as long again as the real distance between Gihon and Siloam; but these windings may be due to the workmen having followed the softest rock. They seem to have felt their way also by boring shafts in the roof, the depth of the rock being an indication of whether they were keeping far enough from the outside scarp.

The inscription is dealt with and described in Bible dictionaries and many other works.

Here is a clear instance where, had it been the habit of Hebrew kings to erect steles to proclaim their own acts or to give the glory to their God, we should certainly have expected to find some such stele erected or carved by Hezekiah.

The following is Professor Sayce's translation of the inscription :

"[Behold] The excavation ! While the excavators were lifting up the pick, each towards his neighbour, and while there were yet three cubits (about 51 inches) to [excavate, there was heard] the voice of one man calling to his neighbour, for there was an excess of the rock on the right hand [and on the left]. And after that on the day of excavating the excavators had struck pick against pick, one against the other, the waters flowed from the spring to the pool, a distance of 1,200 cubits. And a hundred cubits was the height of the rock over the head of the excavators."

"Neighbour" here means his *vis-à-vis* the man working towards him from the other end.

Conder says the tunnel is exactly 1706·8 feet long. This would make the cubit approximately 17 inches. The point at which the two gangs met, after nearly passing each other, is 944 feet from the south-western end.

The excess of rock I understand to be the space between them where they were passing each other.

No king or engineer is mentioned—merely the facts that the tunnel was made, the men worked from both ends and nearly passed, when they broke down the last barrier the water flowed, and the length is 1,200 cubits.

#### THE GEZER CALENDAR (G. I, 24-28)

This small limestone tablet was found in the early Hebrew stratum, and dates between 1000 and 600 B.C. Albright dates it at 928 B.C. The characters are the square Phœnician type found on the Moabite Stone and Siloam tablet. It is a crude piece of work, and had a square hole in it, by which it had been affixed to the wall of an agricultural labourer's hut. Only seven lines remain readable.

It is really an agricultural calendar, detailing the chief work to be done each month. As translated by some scholars, four months are accounted for ; but Vincent and Dalman find it



was intended to be a complete calendar and translate accordingly. The difference of interpretation rests mainly on the reading of one letter, shaped like the Greek letter Upsilon, and the letter M written between lines 4 and 5. The curious U-shaped letter is read by Vincent as N. It occurs in lines 1, 2, 5, and 6. Vincent's translation is :

1. Two months, late crops : two months.
2. Sowing : two months, spring crops.
3. One month, cutting of flax.
4. One month, harvest of barley.
5. One month, all the harvest.
6. Two months, fruits (vines).
7. One month, summer fruits.

Beginning at September 15, he thus makes the year run to the following September 15. Dalman begins at October. Both compare the calendar with the actual rotation of agricultural work at the present day, and find it the same.

The tablet is of no great interest apart from the characters used. As Macalister says, "there is nothing historical, votive, epistolary, talismanic, or magical" in it. He thinks it was probably the work of a peasant proud of his gift of writing, or of an official scribe.

If it is merely the work of a peasant who amused himself scribbling thus on soft limestone, it only adds to our surprise that such unimportant inscriptions have survived, while no steles or more important inscriptions have yet been found in Western Palestine. Nothing like the Moabite stone, erected by a King of Israel or Judah, has yet been discovered. Yet, if Mesha followed the Assyrian, Egyptian, we might almost say the world-wide, custom of those days, it is curious that no tablet of the dedication of his temple by Solomon has ever been found.

In the above tablet flax appears. It is never grown in Palestine now. Of the writer's name, only the three letters ABI remain signed at the bottom.

HEBREW RECORDS OF THE KINGS.—While Mesha erected a stele to record his victories, Hebrew kings appear to have erected no such monuments. Even the Siloam inscription seems to be the work of a workman.

It is probable, therefore, that the records of the king's acts was kept and written down by the official recorder of his reign,



THE MOABITE STONE.



THE CALENDAR-TABLET (GEZER).

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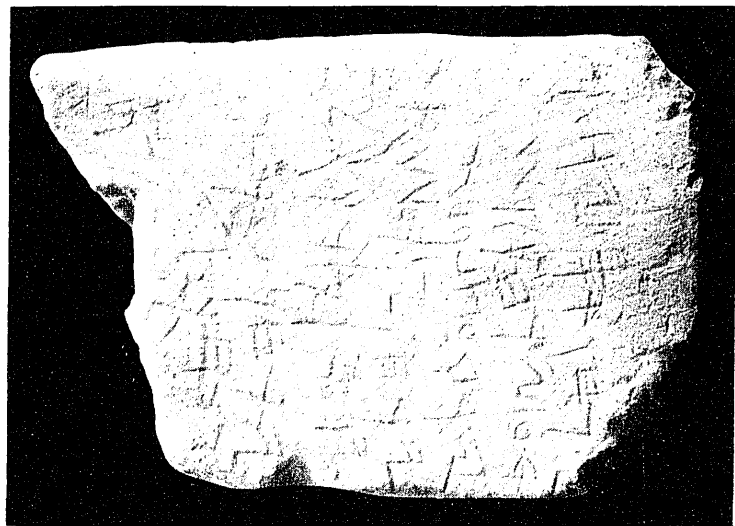
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THE MOBILE STONE



THE CALENDAR TABLE COPIER



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THE OPHEL OSTRACON AND TRANSCRIPTION.

facing p. 129.

who appears to have been a prophet or prophets. The statement at the end of every king's reign—"The rest of the acts that he did are they not recorded in the Book of the Chronicles of the Kings of Judah?" and suchlike (see 2 Kings xx. 20; xxi. 25, etc.)—may thus be the bald truth, and no other record of his acts was left by any of the kings. Probably the idea that he was but the instrument in the hands of Jehovah precluded his taking credit to himself for any of the deeds he accomplished.

See my discussion of the "Original Documents" in the *Accuracy of the O.T. Narratives*.

THE SARCOPHAGUS OF AKHIRAM AT BYBLOS (*J.P.O.S.* VI, 76, and VII, 126, etc. See also *P.E.F.Q.S.*, January, 1926, p. 210)

The inscription on this sarcophagus carries us back to the period between 1300 and 1100 B.C. Here also the Phœnician square characters are used, as on the three above discussed. The characters are practically the same as found on other two inscriptions from Byblos. Thus, apart from any other evidence, this sarcophagus has established the fact that writing in the Phœnician (or early Hebrew) characters was practised as early as 1300-1200 B.C., the period of Joshua's arrival.

I have elsewhere stated my conviction that there is nothing unlikely in supposing that Joshua was able to keep a record of his conquests, so far as the practice of writing in his period was concerned. This sarcophagus inscription belongs to the period of Hebrew conquest, though of course it is Syrian, not Palestinian.

It indicates also that in Syria itself, where at 1450 B.C. public documents were written in cuneiform, as the Tell-el-Amarna Letters show, Phœnician writing supplanted cuneiform by about 1300-1200 B.C. This is the limit of our present knowledge; but it may yet be found that the two were used side by side, as is most likely.

The inscription, as translated by Dr. Albright, reads:

"This Sarcophagus, Itto-ba'al, son of Akhiram, King of Byblos, made for his Father, Akhiram, as his resting-place in the other World. And if any King or Prefect or Commander of a Host (rules) over Byblos, and opens up this Sarcophagus, let the sceptre of his rule be broken, let the throne of his Sovereignty be overturned, and let peace flee from Byblos:

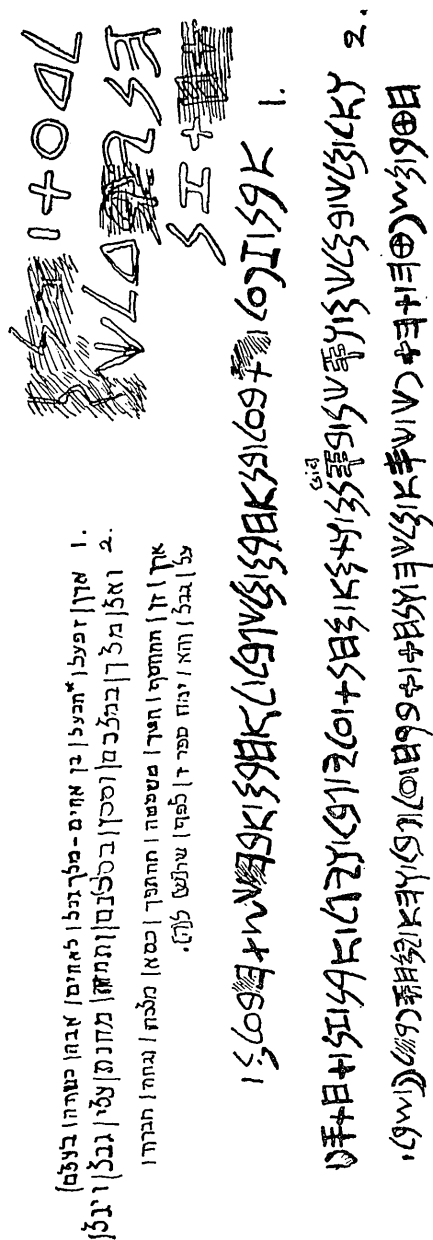


FIG. 22.—INSCRIPTION ON THE SARCOPHAGUS OF AKHIRAM.

and as for him, let his writing be entirely effaced from the Earth (?)."

The inscription is thus mainly a curse on the spoiler to prevent the future desecration of the tomb. It was ineffective, however. The tomb was broken into in antiquity; and for this reason its contents cannot be accepted as safe data for dating, since foreign material may have been admitted.

The names Itto-ba'al and Akhiram frequently occur among those of the Phœnician Kings of Tyre and Sidon between 1000 and 600 B.C.

The expression "blot out his name from under Heaven" occurs in the Old Testament, in Deuteronomy ix. 14, xxix. 20, and 2 Kings xiv. 27. The similar expression "blot out his memory or remembrance from under Heaven" occurs in Exodus xvii. 14, Deuteronomy xxv. 19. In all these instances the same word is used

for "blot out" as is used in this inscription. The idea is identical. There is really no difference between the expression "Let his *signature* be entirely effaced from the earth" and "Let his name be blotted out from under Heaven," as it always occurs in the Old Testament.

In the discussion of the transition from the square to the cursive characters in writing, some writers<sup>1</sup> are concerned about its apparent suddenness. It is considered necessary, for instance, to put the date of the Gezer Calendar back to at least 928 B.C. on the ground that the seventh to sixth century date would make it contemporary with the cursive writing found on ostraca at Samaria and Ophel. It is quite likely, however, that the square characters of the Moabite Stone, Siloam tablet, Gezer tablet, and inscription of Akhiram were preferred for inscriptions carved on stone, as being more easily cut with a chisel than the cursive characters would be. The square and the cursive characters probably continued to be used side by side. Naturally, for writing with a reed on a smooth surface, the cursive would be preferred, and may have been developed much earlier than we think. There is always danger in assorting our data to suit a preconceived idea, or in making it, as we think, fit in with other material where there is really no need.

Is it necessary, for instance, to assume that the "inscription of Abi-ba'al and Eli-ba'al probably archaïse intentionally"<sup>2</sup> because these inscriptions date about 900 B.C. and use the square characters; and because it "would otherwise be difficult to explain the fact that we find the familiar script of the Moabite Stone fully developed in an elegant cursive form on the ostraca of Samaria, not over a generation later" than these inscriptions? Is it not quite possible that the two scripts existed side by side? The archæologist's work is simply to announce the facts. In the light of future discovery they may be left to assort themselves. Theorising on insufficient evidence is interesting, but worthless. We possess very scanty materials so far for the study of phonetic developments or script in the language of Palestine.

#### THE KILAMUYA STELE (J.P.O.S. VI, 84): ARAMÆAN

In the opening lines of the second half of this stele, Albright makes a very clever and probable suggestion. A class of

<sup>1</sup> See Albright, J.P.O.S. VII, 126-127, etc.

<sup>2</sup> *Id. loc.*



people here named the Muskabim are described as acting like dogs in the presence of the kings who preceded King Kilamuya. Hitherto, by the change of a letter (Vav to Kaph), translators rendered it "roamed about like dogs." Taking the text without changing any letter, Albright reads the word (יתליך) as yitlawwun (Ithpa'al of the stem LWV), the same root as found in the Hebrew word "liwyatan," "encircling (earth) serpent," and the Arabic "talawwa," which means "coil, writhe," like serpents.

He accordingly reads the line :

"Before the former Kings the Muskabim crawled (on hands and knees) like serpents, but I (Kilamuya) was a father to one, a mother to another, etc."; and he parallels the expression from the account of Sargon's VIIIth Campaign (line 58), where "Ullusunū and his nobles crawled on their four paws like dogs before the King."

The Muskabim of this inscription are the modern fellahin or peasant farmers, and the Ba'rim of the inscription are the nomads, the modern Bedawin. The inscription is thus interesting as showing an oppression of the peasant population, such as was apparently endured in Palestine under Solomon, and recorded in 1 Kings xii. 1-11, where Israel offers loyalty to Rehoboam if he will remove the grievous burdens wherewith Solomon oppressed them, and Rehoboam scornfully answered them. His scornful refusal led to the division of the kingdom.

### THE STELE OF ZAKIR

This stele is the oldest Aramaic document in our possession so far. It was found at Aphis, אפס of the text, halfway between Aleppo and Ma'arrit En-No'man.

Zakir describes himself as King of Hamath and Lu'as. Lu'as is Nuhasse, and for the change of L to N we may compare Kubna and Gubla, names of Byblos, or Beth-se'al and Bet-se'an (Bethshan), where L and N are interchanged. Nuhasse has been identified with the Greek Chalcis by Winkler on the ground that it is the same word as the Hebrew Neḥoset, Canaanite Neḥuṣtu, "copper," while Chalcis is the Greek word chalkos, "copper" or "brass." Chalcis was later known as Qinnasrin; and Qinnasrin and Afis were part of

<sup>1</sup> Albright, *J.P.O.S.*, VI, 86 (1926).

the kingdom of Hamath about 750 B.C., till it was conquered by Tiglath-Pileser III.

The inscription as amended by Albright in the first three lines, begins :

“The Stele which Zakir, King of Hamath and Lu’as, erected to Iluwer [blur] : I am Zakir, King of Hamath and Lu’as, who speak [as follows] :

“ ‘ My God is Ba’alsamen, and Ba’alsamen stood before me, and made me King in Hadrek.’ ”

For Hadrek, *cf.* Zechariah ix. 1, Hadrach, part of Syria near Damascus. It occurs also in Ezekiel.

For the name Ba’alsamen, compare the names which are compounds of Ba’al on the ostraca of Samaria.

### OSTRACA OF SAMARIA

Sixty-four legible ostraca have been published from Samaria. These are written in early Hebrew or Phœnician characters, which very closely resemble those of the Siloam inscription, but show a slight development of the cursive script.

These ostraca were found in the treasury of the palace of Ahab, and probably date about his period, 850 B.C. At least they must all date prior to 750 B.C., when the palace was destroyed. They are written on fragments of five different types of vessels—large thick amphoræ, with a drab or grey surface ; large thin amphoræ, with a drab or grey surface ; jugs of soft brown ware with a reddish slip ; basins of the same ware ; and bowls of coarse ware with a red or yellow slip, all of these presumably being vessels that were used in receiving and storing the revenue. Sherds with a smooth surface or a slip would naturally be preferred for writing.

These ostraca are evidently part of a somewhat clumsy method of book-keeping. Either they were a “day-book,” notes of daily receipts to be written up in some form of “ledger” afterwards ; or they were the sole record kept of the amount of wine and oil received in various years from various places. They may have been written and handed in by the givers, not by the receivers.

All of them began with a date, such as “In the ninth, tenth, or fifteenth year,” presumably of the reign of Ahab. This is followed by the amount and quality of wine or oil received,

with the name of the place where it came from and of the giver, such as "in the tenth year wine of Kerm-ha-Tell for a jar of fine oil," where evidently wine was accepted in place of fine oil. "A jar of old wine" and "a jar of fine oil" are the most usual descriptions.

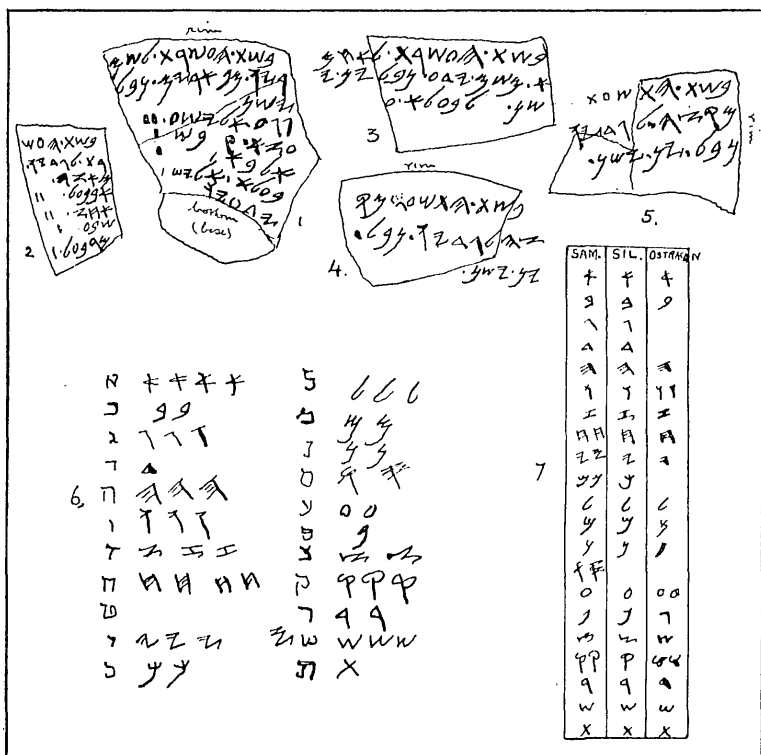


FIG. 23.—SAMARIA, OSTRACA IN FACSIMILE.

Ostrakon No. 1 contains a list of amounts paid in by five people. It reads :

IN THE TENTH YEAR. TO SHEMARYAU. FROM BEER-YAM

*Jars of Old Wine.*

Rage', son of Elisha'..	..	2
'Uzza, son of ( )	..	1
Eliba, son of ( )	..	1
Ba'ala, son of Elisha ..	..	1
Yeda 'Yau, son of ( )	..	1

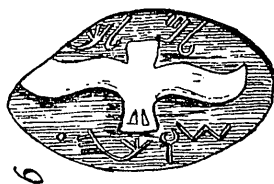
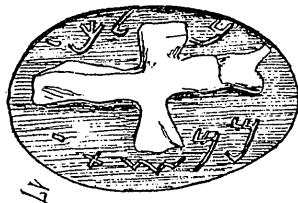
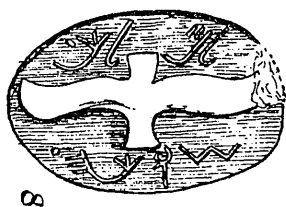
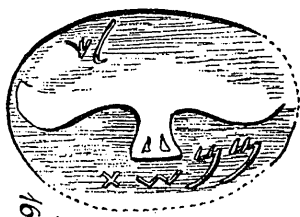
No. 2 is a similar document :

IN THE TENTH YEAR. TO GADDIYAU. FROM AZAH

*Jars of Old Wine.*

Abi-ba'al	..	..	..	..	2
Ahaz	..	..	..	..	2
Sheba'	..	..	..	..	1
Meriba'al	..	..	..	..	1

Shemaryau and Gaddiyau are the names of the officials of the treasury who received them. Be'eryam and Azah



למלך שוכה ממשת

To the King—Memshath.

To the King—Socoh.

FIG. 24.—ROYAL STAMPS.

are the names of the villages or districts, and the other names are those of the peasant farmers who paid their taxes in the form of jars of wine.

NAMES OF PLACES.—Of the places mentioned on these ostraca, Shekem is the only one that can be identified with a place occurring in the Old Testament. In Kerm-ha-Tell, and Kerm-Yahu-'ali, the word Kerm must mean "the village, or vineyard," "of the mound," and "of Yahu-'ali." Compare the village 'Ain Kerem near Jerusalem.

Six of these place-names occur in the Old Testament as "tribal subdivisions of Manasseh," in Joshua xvii. 2 ff.,

and Numbers xxvi. 28 *f.*—viz., Abi-'Ezer, Khelek, Shekem, Shemida', No'ah, and Hoglah. This confirms their identification as place-names or tribal units—or perhaps revenue districts.

The names of the seventeen places occurring on these ostraca are Shiftan, Gib, Yasot, Azat Par'an (?), Abi-'ezer, Kerm-ha-Tell, Shemida', Kheleq, Khoglah, No'ah Shekem, Shereq.

NAMES OF OFFICIALS.—These names are preceded by the word "to," indicating that they were the recipients.

The names occurring are :

Ba'alzamar (*cf.* Baal-saman, stele of Zakir).

Akhino'am.

Shemaryau.

Gaddiyau.

Isha Akhimelek—*i.e.*, Isha, son of Akhimelek.

Nimshi (?).

Bedyau (?).

Akhima.

Kheles.

Kheles Gaddiyau—*i.e.*, Kheles, son of Gaddiyau.

Kheles Afsakh—*i.e.*, Kheles, son of Afsakh.

Khanan Ba'ara.

Gomer.

Khannino'ana.

Yeda'yau.

Yeda'yau Akhimelek—*i.e.*, Yeda'yau son of Akhimelek.

Most of these names sound very unusual and un-Biblical. In form they recall more strongly names occurring in the Tell-el-Amarna Letters and the records of Thothmes III's conquests in Syria.

NAMES OF TAX-PAYERS.—Some of the names of tax-payers on these sherds are :

*Ba'al Combinations.*

Abi-Ba'al.

Meri-ba'al.

Ba'ala of El Mettan.

Ba'ala Elisha.

Ba'ala B(a'alme'oni ?)

Isha Ba'al'azkar.

Ba'ala Za(kar).

*Single.*

Akhaz.

Sheba.

Uzza.

Eliba.

Akhima.

Qedar of Saq.

Kheles of Khaserot.

Akhzai of Khaserot.

*Names with "son of."*

Rage' Elisha.

'Alah Ela.

Gera Khanni'ab.

Ye'ush of Yasheb (?)

“Yau” Combinations.

Yeda'yau.

Gera Yauyosheb. Gera son of Yauyosheb.

Marna-yau Natan (son of) of Yasot.

Abed-yau. (Servant of Yau.)

Abi-yau. (Child of Yau.)

Marnayau Gaddiyau. (Marnayau son of Gaddiyau.)

In these personal names unfamiliar as most of them are, we are struck at once with the fact that Ba'al occurs in their formation with as great frequency as Yahveh or Yah appears in Biblical names of the kingdom of Judah. It is significant of the influence of Sidonian worship of Ba'al in the Northern Kingdom. Yet, if the syllable “yau” is part of the word Yahveh, with “h” dropped out, it would appear that in some families the worship of Yahveh is also reflected in the family name.

These lists of names bear clear testimony as to the co-existence of Ba'al worship alongside of the worship of Jehovah in Northern Israel.

On the sherds found, the only years mentioned are the ninth, tenth, fifteenth, and seventeenth, and the only materials are wine and oil.

*Biblical.*—The names Kheles, Akhinoam, Akhimelek, Khanan, Ba'ara (female), Gomer (female), are all Biblical, while Gaddiyau and Shemaryau are the northern forms of Gedaiah and Shemariah. Some of the Ba'al combinations are of course, Phœnician—*e.g.*, Ba'alzamar. The names Abiba'al, Akhaz, Sheba' Elisha, 'Uzza, Ela, Gera, Rafa, and Natan (Nathan), are all Biblical.

As no complete jar seems to have been found, it is impossible to say what the quantities were, nor can we say whether the jar of oil and the jar of wine were equivalent in value. The inscribed jar-handles of revenue jars which I found on Ophel appeared to me for several reasons to belong to jars of no great size, but here again no complete jar was found. No inscribed jar-handles, such as were found at Gezer and Ophel, were found at Samaria.

#### HEBREW OSTRACON FROM OPHEL

In the rubbish dumped by Captain Parker in the large cave, I found one potsherd inscribed in early Hebrew writing.

The lower layers of debris in the cave had been soaked by

drainage, which filtered in from the modern sewer by the funnel, so that every sherd was covered with mud caked hard.

Every one of the thousands of sherds found, however, was carefully wet and gently handled with the fingers, lest inscribed sherds should be passed over. That only this one was found was a great disappointment; but the fact that the action of the water did not remove the writing nor the slip proves that, had there been others, they would have survived equally well. There is no doubt that it came from a heap of such sherds, which Parker's tunnel excavation merely touched, and I have a good idea of the spot where the heap may be located. It had formed part of a rubbish heap thrown out from the "king's house or treasury," and later from the treasury of the temple. From the same sources came the large number of stamped jar-handles to be afterwards described.

This ostrakon is of great value, not for its contents, but because it is the finest example which we yet possess of cursive Hebrew writing of the sixth to seventh century B.C. The inscription shows the natural tendency of adapting the formation of characters to quick writing, such as the rounding of square letters, making loops or parallel lines into one solid line, and in general changing the form of letters so that they may be formed by an unbroken sweep of the reed (*e.g.*, letters Beth and Mim, Vav, Nun, Qoph and Resh).

The inscription is a mere list of names of men who were perhaps revenue officials in various districts. A facsimile and photograph have been published in my account of discoveries on Ophel in the *P.E.F. Annual* IV, and *Q.S.*, October, 1924.

In my original rendering of the inscription, it reads :

1. "Hezekiah, son of Qore, a Bethelite.
2. "Ahijah, son of Zedek (or Sareq) (who dwells) in Engedi.
3. "Zephaniah, son of Qore, (who lives) among the Kenites or in Kir-hareseth."

Dr. Albright, who worked on it alongside of me, read in line 1 "a Kithlishite," but has now accepted my reading, "a Bethelite."

In lines 2 and 3 he reads, "who dwells in the Valley of Y-R-T," a place as yet unknown. He thinks also that my reading "son of Zedeq," a comment on Ahijah's character, perhaps, is impossible and "a man of Sarog" must be read.

The inscription, however, is of little value in its content. Its great value lies in the fact that it supplies us with a complete cursive Hebrew alphabet, with the exception of the two letters Teth and Semkath, of the seventh century B.C. or earlier.

## JAR-STAMPS

### INSCRIBED JAR-HANDLES

In the debris on the eastern face of the city wall of Zion, chiefly at the extreme north end of our excavation, as well as between the walls, I found about 100 jar-handles bearing stamps in early Hebrew characters.

On these stamps, though some are contemporary, and many later than the ostrakon, the square characters, not the cursive, are used. This bears out my contention that the two forms, square and cursive, were in use side by side, down to post-Exilic times. Evidently, wherever letters had to be carved, whether on stone or on stamps, the square Phœnician characters were preferred, so that we cannot safely base any arguments regarding dates on the use of either.

1. ROYAL STAMPS.—Eight of these bore the words "For the King" with the name of the town which sent them. On three of these the town is "Hebron," on one "Socoh," but the others are illegible.

The design on the stamps seems to represent a dove with outspread wings, and the letters are arranged in pairs above each wing. Three of them have a potter's mark of three concentric circles near the stamp. These were all found on the face of the north stair bastion, at a depth of 30 to 35 feet.

They are assigned to the period of the kings, seventh to eighth century B.C., though some see no reason why the formula "For the King"—*i.e.*, "For the State"—may not have continued in use also when there ceased to be a king, and think they may even be Exilic or post-Exilic—*i.e.*, about fifth to fourth century B.C.

2. FOUR-LETTER STAMPS.—There has been a good deal of discussion over the reading of these. The letters are arranged in a circular stamp, and there is no indication as to which letter begins the name. Discussion centres round two letters, 'Ain and Beth or Daleth. One letter is a small circle, and represents the letter 'Ain; but occasionally the circle has a



stroke through it or a dot in the centre, in which case it would be the letter T (Teth). The other letter in many cases appears to me an unmistakable B (Beth); but occasionally it might be taken for R, as Macalister read it on the example from Gezer. On some, the tail of the letter is so short that it looks more like the letter D (Daleth). Albright reads them in every case Adayah.

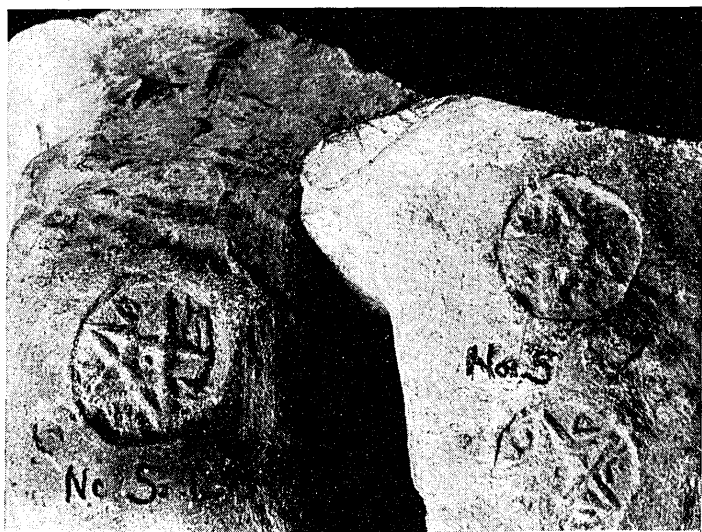
Altogether twenty-two of these four-letter stamps were found, seventeen of them quite clear and four partly legible. Most of them were found in the space between the walls at about 22 feet depth. They belong, therefore, to the period before the space was filled up by the Maccabeans. They date about or prior to 600 B.C.

*Adaiab.*—There is little doubt that these handles are rubbish thrown out of the Temple treasury; and whatever be the name inscribed, there is no doubt also that it is the name of the Temple treasurer of the time. If it be read Adayah, as seems likely, on some of them at least, Adayah was the head of the Temple treasury, and in these jars the State taxes or tithes in wine or oil were paid and stored in the Temple.

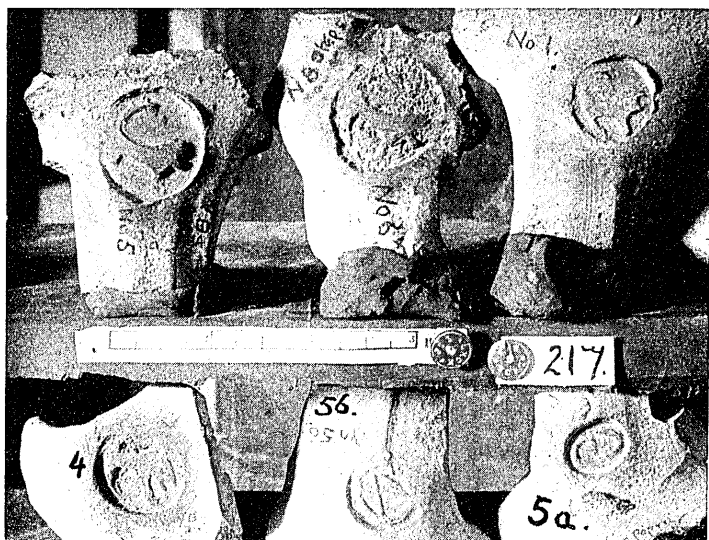
No fewer than nine men of this name occur in the Old Testament between 900 and 500 B.C.<sup>1</sup> One of these occurs in the passage Nehemiah xi. 10-14 (*cf.* 1 Chronicles ix. 10-13), which details the composition of the people of Jerusalem after the Restoration. Here an Adayah ranks as the second or third in importance in the priestly hierarchy. He may therefore very well have been treasurer of the Temple. In short, he may be the Adayah of these jar-handles.

3. THE FIVE-LETTER STAMPS.—Altogether twenty-three stamps were found on Ophel in my work, bearing a pentagram, such as is usually described as the Seal of Solomon, with a letter between every two points. These five letters are far from clear, and were a great puzzle at first, but by comparing them with those found at Gezer, Albright has decided that the name on every one of them reads "Selemyah," and this Selemyah is no other than Selemyah the Priest, whom Nehemiah placed over the treasury, when he set the Temple finances in order, as recorded in Nehemiah xiii. 10 *ff.* The Temple servants had returned to their villages and fields because their salaries were not being paid. This reading seems indisputable. The letters are exactly as deciphered by myself in my report

<sup>1</sup> See *J.P.O.S.* (Albright), vol. vi, p. 96.



FIVE LETTER STAMPS—SELEMYAH.



LION STAMPS—TETH DO.

facing p. 146.

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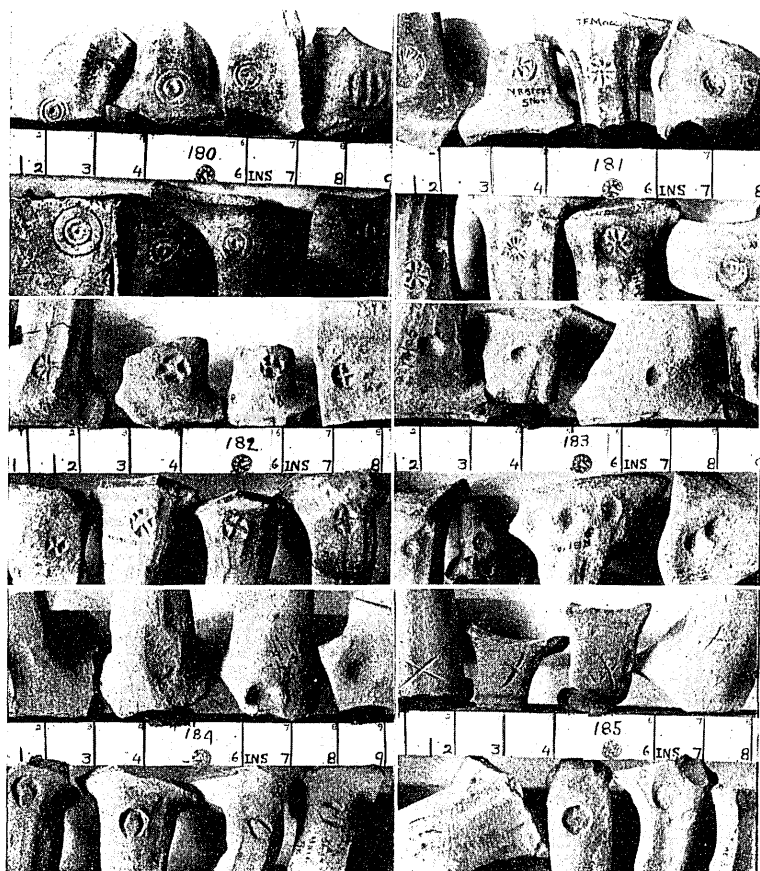
<sup>1</sup> See *J.P.O.S.* (Albright), vol. vi, p. 96.



FIVE-LETTER STAMPS - SELENUVAH.



LION STAMPS - TETH DO.



JAR-HANDLES: POTTERS' MARKS.

facing p. 141.

of them, though I arranged them in different order, notably in the case of No. 3.

These pentagram stamps therefore belong to the fifth century or about 450 B.C.

4. **THREE-LETTER STAMPS.**—Six handles with a three-letter stamp were found on Ophel. Two of these have not yet been deciphered. The extreme letters might be early Hebrew, but the middle letter is unknown. If Dr. S. A. Cook's suggestion that it is Q be right, these would read TQH or HQT.<sup>1</sup>

On the other four the letters read Yahu or Jehu<sup>2</sup> (יהו) unmistakably. These are known as the Yahu handles. On the ground that these characters are not early Hebrew, but early Aramaic, like the inscription at Araq-el-Amir, Albright assigns them to the period after Ezra's reform, when the theocracy of the prophets and priests was most fully realised in Judah. This would account for the substitution of Jehovah's name in place of that of the treasurer of the Temple on these jar-handles. State revenue or Temple taxes were no longer payable to Adayah or his successor, but to Jehovah. Two examples were found recently in Mizpah (Tell-en-Nasbeh).

These date, therefore, about 400 B.C. The introduction of the Aramaic script by Ezra may thus be the background of the tradition that Ezra introduced the "Assyrian" script.<sup>3</sup>

These "three-letter" handles were found at a depth of 18 inches between the walls. As the filling here represents a clearance of the city by the Maccabeans when the space between the walls was clear to 20 feet depth at least, these jar-handles belong originally to the stratum some 3 feet below the Maccabean. This fits in well with this dating.

5. **TWO-LETTER STAMPS.**<sup>4</sup>—Thirteen jar-handles from Ophel bear a two-letter stamp. On every one legible, these letters are Y and H, the first and the last letters, the "Alpha and the Omega," of the name Jehovah.

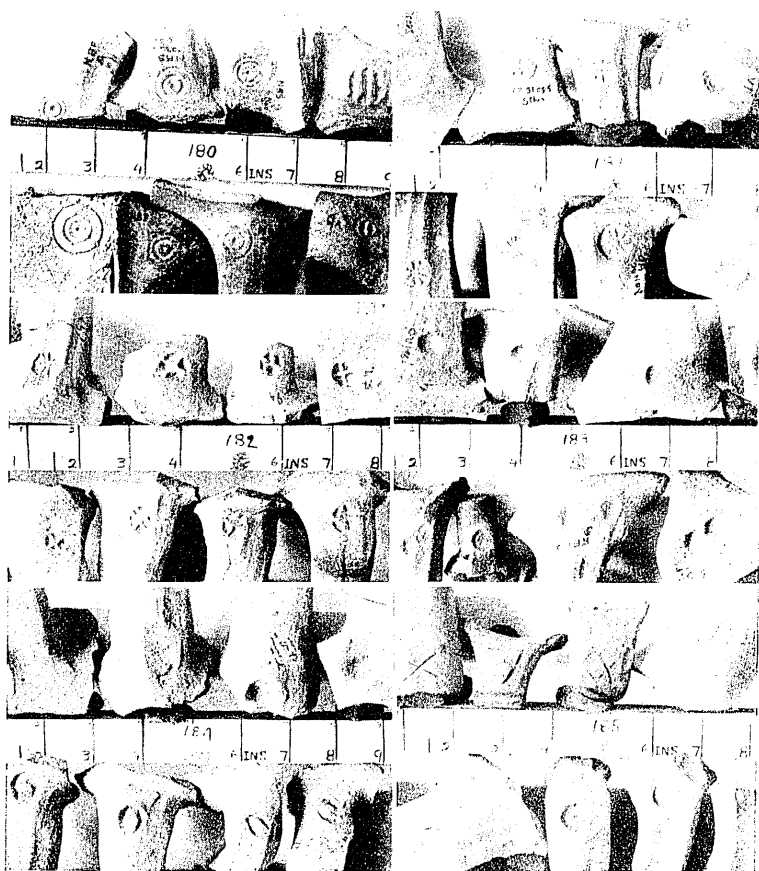
The formation of these is the same as the last class, and they seem to belong to the same period, that of Ezra's restoration of the theocracy about 400 B.C. The depth at which they were found represents the same stratum, and supports this date.

<sup>1</sup> See *P.E.F. Q.S.*, April, 1925, Pl. 4, Nos. 14, 15.

<sup>2</sup> See *P.E.F. Q.S.*, April, 1925, Pl. 4, Nos. 16, 17 and 18.

<sup>3</sup> See *J.P.O.S.*, vol. vi, 102.

<sup>4</sup> See *Q.S.*, April, 1925, Pl. 4, 7, 8, 9.



JAR-HANDLES: POTTERS' MARKS.

See figs. 10, 141.

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<sup>3</sup> See *J.P.O.S.*, vol. vi, 102.

<sup>4</sup> See *Q.S.*, April, 1925, Pl. 4, 7, 8, 9.



6. ONE-LETTER STAMPS.<sup>1</sup>—Three handles were found with the letter Y only. This is the first letter of the name Jehovah. In two cases it was stamped, in the third it looks as if it had been roughly carved. These belong to the same period as the previous two types, or perhaps a little later, 400 to 300 B.C.

Two handles<sup>2</sup> bore a stamp like our letter C with two small lines crossing each other at right angles inside it. In these the letter is not stamped or incised, but left in relief. The stamp may be the Hebrew letter Teth.

Two small pottery weights, found at 15 feet depth between the walls, bore the same mark. It may thus represent a mark indicating the genuineness of the weight or measure. If so, it is very likely that, while one of the handles of these treasury jars bore the stamp of its ownership, the other handle may have borne this mark of the genuineness of its capacity. In Lidbarski's *Elephantine Papyri*, on Plate VI, there are eight different fragments of papyri, which bear a similar sign alongside of the inscription, and apparently forming no part of it.

In each of these eight fragments the Hebrew words preceding the sign read "For the King." It is possible, therefore, that these are the second handles of jars whose other handles bore the inscription "For the King"—the royal stamp. In this case they would date about the eighth to seventh century B.C. They were found at 6 feet depth in the inverted stratification north of the north stair bastion. This would support a pre-Exilic date. When we found these, I assigned the ware to the late pre-Exilic period or about 650 B.C.

Another stamp is a pointed oval with a line inside from point to point. This<sup>3</sup> may be the letter Teth, and a variety of the same stamp of capacity.

These three stamps are probably all Hittite, the letter C with the cross inside being the Hittite sign for the sun-god.

7. LION STAMPS.—Besides those described above, in the debris on the face of the east wall of Jerusalem I found yet another class of stamped jar-handle.

Here the stamp is a lion with no writing whatever. The ware seems early post-Exilic. The depth at which they were found would place them earlier than the "Yahu" stamps, but a mixed stratification such as we found here is no safe guide to dating. The figure seems that of a lion rampant, or rather

<sup>1</sup> *Id. loco*, Nos. 1, 2, 3.

<sup>2</sup> No. 10 on Plate.

<sup>3</sup> *Id. loco*, No. 5.

of a roaring lion, for his mouth is wide open, and his attitude threatening. The tail is curled up above the back of the lion, as is found in the case of Assyrian lions.

There are six of them altogether. Three of these stamps are  $\frac{3}{4}$  inch, one is  $\frac{7}{8}$  inch, and two are 1 inch in diameter. Five are undoubtedly put on with a stamp. The other looks as if the background had been picked out, leaving the figure in relief. I say this because the slip has disappeared from the background, though it remains on the figure.

Compared with the lion on the Seal of Shema, servant of Jeroboam, found at Megiddo and dated about 780 B.C., the work on these stamps is crude. It is difficult to assign them to their exact date. The handles are triple-fluted reddish ware with a yellow slip, and vary from  $\frac{1}{4}$  to  $\frac{1}{2}$  inch in thickness. This points to a date about the fifth century B.C. or later.

There may be some connection between these figures and the symbolism of Revelation v. 5: "The lion of the tribe of Judah hath prevailed to open the book." On the other hand, the stamps or the passage quoted may have some reference to the lion in the worship of Astarte.

The tail curved over the back shows Assyrian influence, but is not a guarantee of an early date.

#### A HITTITE STAMP

Of the jar-stamps not shown on Photo Plate, one is of special interest. A similar one is shown in *Ann.* IV, page 189, No. 10.

In my first report I described this seal as bearing Hittite characters, and Professor Sayce now confirms this view (*Q.S.*, October, 1927, page 216). The three characters on this seal he regards as Hittite hieroglyphs, and they read "The Sun-God King of the Mountain Land." The circle with the dot in the centre is the common ideograph for the sun or sun-god. The wedge in the centre and the three triangles represent King of the Hill Land.

This is specially interesting, as the El-Shaddai of Genesis xiv. is "the God of the Mountain," who was also the Amorite god. This I have discussed under Genesis xiv., in the *Accuracy of the Old Testament*. The circle and dot sign is usually followed by the Hebrew word "hari," "hill" or "hill land," but here the Hittite hieroglyphs are substituted

instead, showing that Hittite writing was known then in Palestine.

Professor Sayce is probably also correct in his idea that Har-el "the Mount of God" in the geographical list of Thothmes III means really "Jerusalem" (*cf.* Gen. xxii. 14).

For drawing of these Hittite stamps see *P.E.F.Q.S.*, April, 1925.

#### THE PURPOSE AND DATE OF THESE STAMPS

On royal stamps the centre is a device of two wings or four wings, and the Hebrew letters are arranged usually in the four corners. The upper part reads "For the King," and the lower is the name of the town or revenue centre which sends in the wine or oil jars to the treasury in Jerusalem.

Several of the royal or "For the King" stamps were found in the Tells excavated by Bliss and Macalister (see Fig. 24). These are shown on *E.P.*, Pl. 56. Some have a two-wing device and some four wings. The four-wing device occasionally degenerates so as to resemble a rough cross, and sometimes it looks almost like a beetle. On these specimens the towns mentioned are Hebron, Socoh, Ziph, and Memshath. The last named has not been identified, but there is no doubt that these represent the centres of four revenue districts, where had been stationed a revenue officer or governor, who was responsible for the government of the district to some extent, as well as the collecting of the State revenue. Thus the Hebrews practically adopted the same system of government and revenue collecting as was in vogue among the Canaanites, and as we saw in practice in the Northern Kingdom, where Ahab's treasury was the centre and local revenue centres paid the revenue into it (see 2 Chron. xxxii. 27-28).

After the Exile, as we saw, when there ceased to be a King of Judah, these jars were paid into the temple treasury, and the stamp then bore the name of the treasurer of the Temple for the time being. One treasurer whose name occurs on these jar-handles was probably Adayah. Later, in the time of Nehemiah, Selemyah was appointed (Neh. xiii. 10 *ff.*) to preside over the treasury at Jerusalem, and we find his name on the pentagram stamps above described from Ophel.

In the reformation of Ezra the government became a

theocracy pure and simple. The revenue then became payable not to the treasurer but to Jehovah Himself, and accordingly we find a variety of jar-handles stamped with the name Yahveh (Jehovah) in various forms.

Thus of these various revenue stamps the oldest are those with the inscription "For the King." These belong to the pre-Exilic period when there was still a King of Judah, and must therefore date prior to 597 B.C., the date of the Exile.

Next in order of date come the Adayah, four-letter stamps, which represent the Exilic period, 597-440 B.C. Then come the Selemyah, five-letter pentagram stamps, which belong to the Persian or Nehemiah period about 440 B.C., and last come the Yahveh stamps, dating about 400 B.C.

As these handles had all belonged to jars thrown over the wall from the treasury as soon as they were empty, they leave no doubt that the Hebron and Socoh jars had been revenue paid into the treasury and that Hebron and Socoh were two local revenue centres in the time of the kings.

Three of these eight royal stamps from Ophel have the potter's mark of three concentric circles alongside the stamp, as shown on *E.P.*, Pl. 56, 18. The stratum and position in which I found these confirms their early date as well as the fact that they had been thrown out of the treasury.

Several royal stamps were found at Mizpah in 1929, and on one of these the tail feathers of the figure are so minutely shown as to leave no doubt that it represents a dove or eagle.

Two jar-stamps, bearing the letters MZP, have also been found at Mizpah. There are the consonants of Mizpah itself, and the stamps had been royal stamps, bearing the inscription, "For the King—Mizpah."

Another bears the consonants MZH, which is regarded as a reference to the feast of unleavened bread, for what reason I do not know. The word Māzakh with the hard *h* is given by Gesenius as meaning a "girdle." If it is the soft *h*, the word Mězāh means "poor, emaciated, hungry." The letters, however, may be another abbreviation of Mizpah, which seems most likely. The stamps, like those above dealt with, belong to the pre-Exilic period.

## HEBREW POTTERS' MARKS

Of the potters' marks shown (Figs. facing p. 141), the oldest are the punch holes made with a blunt pointed stick or the thumb, the cross-lines, the horseshoe, which seems to have been made with a rough stamp, and the concentric circles. These are pre-Exilic. The others, as well as the pottery on which they are stamped, are all Exilic or post-Exilic, dating from 600 to 400 B.C.

VIII  
BURIAL CUSTOMS  
*c.* 3000 B.C.—650 A.D.



# BURIAL CUSTOMS

## THE CAVE-DWELLERS

### GEZER, CAVE 2, I

CREMATION.—One cave at Gezer (Cave 2, I) is regarded as a cave-dweller crematorium. Though it was later used as a burial-place, its earliest strata seem to indicate that the cave-dweller employed cremation as well as ordinary burial.

As a cave it is not important, but its contents are of the highest value.

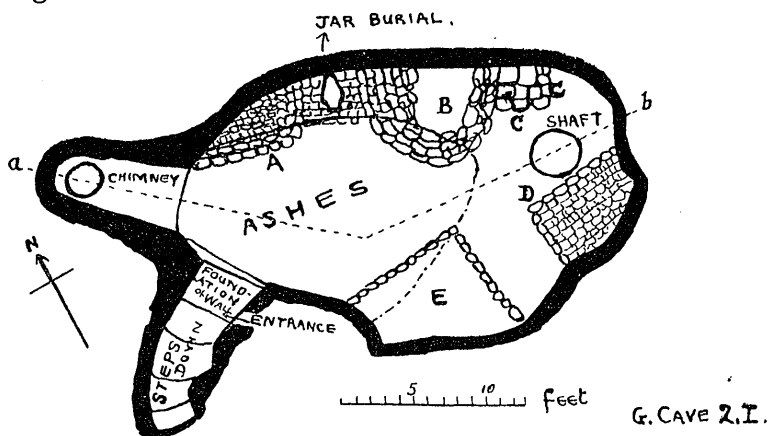


FIG. 25.—CREMATION CAVE—G. CAVE 2, I.

It consists of only one chamber, 31 feet long, 24½ feet wide, and 5 feet in height, though in parts the roof is only 2 feet high. The limestone surface is so friable that it cannot be decided whether it was artificial or not. There are no tool-marks visible.

Entrance was by a stair cut in the rock, and beside the mouth of it are some cup-hollows. The stairs at least are artificial. The standing-stone near them (2 feet high and 19 inches diameter) belongs to the people who used it as a burial-place. It is therefore later. Where the rock is rotten on the left wall of the stairway, rude masonry has been substituted.



In the soft stratum, 2 feet thick, under the roof of the cave is cut a narrow tunnel. This ends in a conical chimney, 9 feet long, which leads to the surface. The chimney is 29 inches wide at the bottom, and only 8 inches at the surface. It cannot, therefore, have been an entrance.

Just under the inner end of the small tunnel lay a pile of human bones, all burnt to ashes, and similar ashes were scattered over the floor in the space marked by dash-dot lines on the plan. The ashes close to the chimney were burned white, "as if they had been subjected to greater heat." Near the cave entrance these ashes were 12 inches deep, but diminished to a mere sprinkling at the inmost edge. The fact that the strata of ashes were white and black alternately under the tunnel indicates that this was not one isolated instance of cremation. There had been successive burnings.

It was clear also that the bodies had been burned complete on the spot. The bones were in position, and a bone amulet worn by one of them was found in its proper place. Such of these bones as have been measured indicate that the cave-men were of small stature, averaging  $5\frac{1}{2}$  feet in height, but there were only a few specimens available. Women averaged 5 feet 3 inches. Two facts are noteworthy here.

1. The ashes of the dead are left in position, and fresh cremations took place above them. There is therefore here no evidence of urns and columbaria being used by the cave-dweller, as is suggested in *E.P.*, p. 269.

2. It is surprising that the roof and sides of this cave are not blackened with smoke. In caves now used as khans by shepherds the interior is covered with a thick glossy surface resembling a heavy coat of black enamel.

In Cave 2, I, however, the surface of the limestone is so powdery that all traces of smoke may easily have disappeared: or the next occupants, who used it as a burial-place, may have cleaned the walls. It is possible also that the fuel used may account for it to some extent, especially if they used charcoal. There were burials also in the cave—some in enclosures round the sides, and many simply thrown down on the floor in a contracted position.

The pottery found in the cave (*Gezer* II, 153) confirms the statement that this cave was used by cave-dwellers. Some of it seems to belong to the cave-dweller ware, judging from the photographs, Figs. 314, 315 (*G.* II, 152); and Macalister

associates this pottery with the crematorium, but one vessel at least in Fig. 315 dates about or after 2000 B.C., and belongs to the Amorite occupation.

The question, however, arises : Does this pottery go with the burnings, or with the later burials ? Macalister says it was found *deposited with* the burnt bones. If so, it ought to show proof of having itself been burned with the bodies. There is no mention of that. Even supposing the pottery was deposited after the body was consumed, it was bound to be burned in the next cremation.

It seems to me unlikely that the cave-dweller deposited pottery in the case of cremated bodies. It would imply a belief on their part of a spiritual immortality, not the material or physical immortality which we have usually attributed to them. To deposit food or drink or utensils for the use of a body already reduced to ashes must have seemed even to them quite unnecessary.

I am convinced that this pottery must have been deposited after the burnings, and belongs to the burials. As the pottery is undoubtedly cave-dweller ware, though some of it seems late Neolithic, this implies that the cave was at a very early date used for these burnings of human bodies, and in the later Neolithic Age and Early Bronze Age was used for burials, when it had ceased to be used for cremation.

In the burials many bodies were deposited all over the floor in a contracted position. This points to a very early date. The bodies were practically laid in a heap above each other, so that the bones became commingled, as if thrown in from an orifice above.

Apparently, for better-class burials, enclosures (A, B, C, D, E) were laid off surrounded by rows of large stones. Here the bodies lay full length. One of these enclosures (A) was paved with flat stones to a height of 8 inches above the floor.

Between A and B on a similar raised pavement, which had no wall round it, stood "a large jar (28 inches high) of coarse, gritty, brick-red porous ware, with flat base and "rope-moulding" round the body. It was kept in position by stones and sherds of another similar jar. By the description, it seems that this jar may be Neolithic or cave-dweller ware. It is associated with the enclosure burials. This pot is itself a burial. It contained the skeleton of a newly-born infant. It belongs to the same period as the ware shown

in *Gezer* II, Figs. 314-317. The burials, therefore, belong partly to the Neolithic or cave-dweller period, and the pottery found "deposited with the burnt bones" apparently came from these enclosure burials.

In enclosure B the surrounding stones were "set in stiff mud." The others are dry-stone enclosures. It seems to have been an unfinished beehive shape. At a date after the upper rows of stones had fallen in, a "*very fine collection of pottery was deposited over them.*"

C was really a sort of solid raised altar or platform of flat stones one foot above the floor level, and about four feet square. It had been demolished and rebuilt.

D was a burial enclosure like A, and E was similar, but with a higher wall round it.

In those enclosures the bodies had been *laid at full length, not contracted*. Macalister suggests that this indicated different rank.

Some of the pottery was found lying about on the floor of the cave, but with no attempt at grouping. Apart from the fine collection laid above enclosure B, the rest were found, "usually in pairs *a jug and a saucer,*" *built into crevices of the burial enclosures.*

The pottery found thus appears to belong to the enclosure burials, and no pottery was deposited with the contracted burials thrown carelessly on the floor. Its presence there was accidental.

At a later date, the stair entrance had been blocked by a wall, the foundation of which remained *in situ* at the bottom, and an entrance shaft had been cut in the roof. A stone 65 inches in breadth covered this roof-shaft.

It seems really that these enclosure burials belong to an earlier period than the contracted burials on the floor, and further that the bodies in contracted form were simply thrown down into the cave by the hole in the roof, not carried down the stairway and carefully deposited as in the enclosure burials. This promiscuous heap in the centre, therefore, belongs to the period when the staircase ceased to be used.

The stair entrance had probably been blocked because the space was required for buildings, and a roof-shaft would not give such easy admission to dogs or thieves.

It seems, therefore, that we have here three phases of sepulture represented :

1. The burning of human bodies.
2. The full-length and enclosure burial—probably before the stairway was blocked.
3. The contracted burial which seems to have been simply a careless throwing-in of the bodies, doubled-up as they died, perhaps, and a replacing of the slab on the shaft.

The first two are Neolithic and early Amorite. The third belongs to the so-called Early Bronze Age, *c.* 2500 to 2000 B.C. *Was this a crematorium?* There is really no evidence to decide whether this was a crematorium or not. It may have been a cave where human sacrifices were offered. The cave seems to have been invested with some religious significance all through. There are three cup-hollows near the entrance to the staircase, and when these had been covered by a foot of earth, a standing-stone had been erected, at a later period, by the Amorites, thus continuing the tradition of sanctity.

The cup-hollows may, of course, have been connected with any crematorial rites; but there seem to have been too few bodies cremated for us to base on this as indicating a general practice, and no other indisputable evidence of cremation at this early date has been discovered in Palestine.

The enclosure burials are certainly very early, for some of the pottery is of the cave-dweller type, though the cord-eye-handle vessels may be Amorite, or imitations of Amorite.

It may be, therefore, that in the remotest period the cave-dweller cremated his dead, or offered human sacrifices; and that later the cave was used for full-length burials. The contracted burials belong to the period when the roof-shaft took the place of the staircase entrance, and the contraction of the bodies may have been accidental. If it was intentional, this again points to a very early date. Contracted burial was the rule in the Naqada graves in Egypt, dating 6000 to 4000 B.C., whether the body was placed in a pottery cist, or simply laid in a pit. The practice may have continued in Palestine till, or even after, 2000 B.C. It seems pretty certain from the disposal of the bones that the contracted burials were simply let down or thrown in by the roof-shaft.

We conclude that the cave-dweller may have cremated his dead, and probably used both full-length and contracted burial.

OPHEL "BURIALS."—In the great cave on Ophel, I found similar conditions. There were at least three graves carved in

the rock near the eastern entrance, measuring about  $2\frac{1}{2}$  feet long by 2 feet broad and 18 inches deep, which closely resembles the measurements of the pottery cists at Naqada. Clearly in each case the size proves that these burials were contracted burials. The small cave to the south, accessible by a low, natural, or roughly cut arch, contained also one such grave, and in it were the leg bones of a man with a small jug of the same cave-dweller ware as found in Cave 2, I, at Gezer. On the floor lay a heap of bones as if many bodies had simply been laid or thrown in. This small side cave had also a funnel roof entrance, blocked with stones.

On the north side of the large cave, too, was a full-length burial. A body had been laid on a flat platform of rock and encased in hard mud plaster.

Thus, in this cave on Ophel, we find three types of burial which are found in Gezer, Cave 2, I—viz., the specially set apart burial; the bodies thrown down in contracted form; and the full-length burials—but I saw no charred bones, though it is quite conceivable that every trace of them had been removed. The funnel in this cave corresponds with that of Cave 2, I (Gezer), but is large enough for a man to pass through. The same pottery was found in both.

It is curious that the funnel of this large cave on Ophel opens into the middle of rock-surface cuttings, part of which I ventured to describe as being a crematorium.

This particular cutting consisted of a large central hollow with perhaps eight<sup>1</sup> oval hollows radiating from it all round in almost a perfect circle, suggestive of the sun and its rays; and I suggested that this, along with the system of cup-hollows and other rock cuttings on the surface of the rock, was a high place for the worship of the sun—victims being sacrificed on this sun-rays cutting. That there had been burning on it is indisputable. The huge heap of burnt ashes, containing many small chips of bone and bone-dust, places that beyond controversy.

It seems to me that these two caves at Gezer and Ophel were each associated with some form of religious cult, and used for a similar purpose. Whether that purpose was cremation or sacrifice must be decided by future discoveries.

*Note.*—It should be noted that though the plan of F. 7 in *P.E.F. Annual* IV shows them some distance apart, the

<sup>1</sup> Only four were uncovered.

rock cuttings and cup-hollows which I found in that field are part of the "high place" which Macalister uncovered before he left. There is an error in the plan which my assistant and I could not locate.

It would seem from the occurrence of graves in this large cave on Ophel that cave-dwellers sometimes buried in the cave where they lived. This may be so. Père Vincent examined these graves. I found them empty.

The burials in these small rock-cut pits, however, were contracted burials, and may belong to the civilisation which we describe as the Early Bronze Age—prior to 2000 B.C. They may have been made after the cave ceased to be a dwelling. Similarly, the contracted burials in Gezer, Cave 2, I, I regard as belonging to this same civilisation, which we found represented at Naqada, and not to the cave-dwellers.

The pottery found by Père Vincent in the Ophel cave is not cave-dweller's pottery. It belongs to the civilisation I speak of—viz., the E.B. Where exactly he found it, and in what surroundings does not seem clear. If he found that pottery in the little side cave where I found the contracted bodies thrown down on the floor, we should at once assign all the rock-pit contracted burials to the cave-dweller, since the jug I found in one of them is certainly cave-dweller ware, the same ware as found in the "enclosure" burials of Cave 2, I, at Gezer.

In Cave 19, I (Gezer), another full-length burial was found with a fence of stones built round it, as in Cave 2, I. In Chamber 8 of Cave 28, II (Gezer), also there had been several interments, but these may belong to a later period.

While Macalister speaks of cave-burial as the usual custom (G. II, 288-289), he appears to refer to the period from 2000 B.C. downwards.

There is no doubt whatever that in the Early Bronze Age, prior to 2000 B.C., unoccupied caves were used as burial-places; but it seems also that the cave-dweller buried even in the cave which was his dwelling.

We may conclude, therefore, that the cave-dweller may have cremated his dead; but if he used cremation it was not a universal custom. He used also full-length burial, and contracted burials placed in rock-cut pits.

It appears also from Cave 2, I, that infant burial in jars was practised in this period, not necessarily as sacrifices.

## SUMMARY

(See *Gezer* I, 390 *seq.*, Pls. 56-59.)

CAVE-DWELLER.—In Cave 2, I, at Gezer and the Ophel caves, which have been discussed above, we find five methods of disposal of the dead in practice.

1. The cave-dweller seems to have practised cremation at a very early period, unless we regard Gezer, Cave 2, I, as a place of sacrifice. This cave is so far the only evidence for the practice.

Recently, cremation jars have been found at Gerar and Bethpelet (Tell-Fara), but these belong to foreign immigrants and date about 1500-1200 B.C. Cremation was also common at a later date, as the columbaria in the Shephelah caves and elsewhere abundantly prove.

2. The cave-dweller appears to have buried occasionally in the floor of the cave which he inhabited, scooping a hole in the rock large enough to admit a body in a contracted or doubled-up position. Examples of this I found in the cave at Ophel.

3. Occasionally he used a smaller cave adjacent to his cave-dwelling, as we found at Ophel. In this small cave was one scooped grave in the rock, containing bones of a man and a jug of cave-dweller ware, as well as a heap of bodies thrown down on the floor in contracted position.

4. In the large cave on Ophel also was found a body laid at full length on a flat ledge of rock and covered over with lime, mud, and plaster, which was found very hard to break.

Full-length burials were found also in Cave 2, I, at Gezer, but the pottery points to their belonging to the Early Bronze civilisation.

These full-length burials were all separately set apart in special enclosures, and appear to have been the burials of chiefs or important people. Probably also the contracted burials in specially hewn rock-pits were those of important people.

5. Many skeletons are found in a heap, as if the bodies had been dropped into the cave by a hole in the roof, in the doubled-up position in which they died.

We may conclude, therefore, that the cave-dweller in the case of ordinary burials simply threw the bodies in the contracted position in which they died into a cave set apart for the purpose, inserting them probably by a hole in the roof,

allowing them to lie in a disordered heap such as I found in the side cave B on Ophel. In these thrown-in burials the contraction of the body may be accidental.

Important people they buried in small rock-pits cut in the floor of a cave which may have been their own dwelling. These were contracted burials. Here the body had to be contracted.

Others they buried at full length in a space set apart and protected by some sort of rough enclosure, or encased in plaster.

They may also have used cremation, though the evidence is not yet decisive.

ESCHATOLOGY.—That they had some sort of belief regarding the future is evidenced by their burying jars, jugs, beads, and other worldly necessities with the dead—the vessels probably being originally filled with food and drink for the use of the departed. If they worshipped the departed spirits of their ancestors, this also implies a belief that the dead continued to live and exert an influence over the living, though unseen. That they had not reached the idea of a spiritual immortality, however, is evidenced by the burial of the necessities of life with the dead. The future life was simply a continuation of the present life and under somewhat similar conditions. The spirit had no life apart from the body.

#### THE EARLY AMORITE OR EARLY BRONZE AGE, 2500 B.C.

The Amorites immigrated into Palestine from the north, took possession of the country at a very early date, and existed side by side with the aboriginal cave-dwellers down to about 2000-1800 B.C., when the cave-dwellers seem to have been more or less absorbed.

The Amorite of 2500 B.C. was a great builder, and used caves only as burial-places. Thus, alongside of evidences of cave-dweller occupation, we frequently find in caves burials which the accompanying pottery compels us to assign to the early Amorite civilisation.

The beautiful painted pottery found in the great cave at Ophel leaves no doubt that some of the burials there were early Amorite. Similarly, in the "crematorium" cave of Gezer, the pottery indicates that the full-length burials in



enclosures belonged to this civilisation; while the heap of contracted bodies in the centre, thrown in by the hole in the roof, points to the use of this cave as a burial-place or repository at a still later period, when the entrance stairway had been built up and a hole in the roof substituted.

Instances of the adaptation of caves as burial-places by the early Amorites are numerous. The following are some of the outstanding examples from Gezer. Their date is determined partly by the pottery deposited with the bodies and partly by other concomitant circumstances.

In Cave 3, III, which was entered by a winding stair from outside, the floor had been covered with a layer of lime, under which were found two cup-hollows, pointing to its earlier use by the cave-dweller as a dwelling.

Here the burials were of a unique nature. After the flesh had disappeared, the bones had been collected and thrown in disorder into big jars halved lengthwise. These jars were too small for even two placed end to end to contain the original body. Around the sides of the cave were placed large wine jars, with small jugs of the type known as wine or water dippers. The large jars stood upright, as if originally containing liquid, and no trace of stopper remained. This pottery belongs to the Early Bronze Age.

In Cave 11, III, the bodies were stretched at full length, and twenty jars had been deposited with them in no special order.

Cave 17, I, consisted of two chambers, one very large, with a smaller room or mere cell opening off it. Only one body was found. It was a contracted burial. The entrance was by a stairway. Bowls, jars, and saucers were placed around the walls, and an ancient olive press was found in the floor. This solitary grave must have been the burial of some important person, and in a cave that had formerly been a dwelling.

Cave 19, I, was a natural cave, with a hole entrance made in the roof. This contained the full-length burial of some important personage, fenced round by a rough enclosure of stones as in Cave 2, I.

Eight small, hand-made, cord-eye-handle jugs,<sup>1</sup> decorated with a basketwork pattern in red paint, and averaging only about 2 inches in height, were found deposited with the burial. A few cornelian beads, similar to those found in Cave 2, I, and three slightly larger juglets, with loop-handles, were also found.

<sup>1</sup> See *Gezer* I, 108, Fig. 37.

The roof entrance of this cave was blocked by the foundation of a tower of the inner city wall. The pottery may very well be cave-dweller ware, and the burial itself may be a cave-dweller burial; but the fact that the cave entrance was blocked by the city wall leaves no doubt that the burial and the pottery cannot be later than the Early Bronze Age (2500 B.C.).

Cave 27, I, had been floored with a pavement of cobblestones before being used as a tomb, and one cup-hollow was found beneath this floor. It also had been a dwelling.

It contained the burials of five adults and one infant in *contracted position*. Hand-made cord-eye-handle jugs, of the same type as those in Cave 19, I, and pear-shaped stone mace-heads were found in this cave. The pottery could not all be definitely associated with the burials; but the mace-heads were placed beside the skeletons—two of them under the central body and one with each of other two bodies.<sup>1</sup> Fragments of large wavy-ledge-handle jars, “porridge” ware pots, pots with rope-pattern moulding and painted designs were also found in considerable quantities.

The pottery seems to be Neolithic ware, and may be the remains of cave-dwelling occupation, not connected with the burials in any way; but the early date of the burials is attested independently by the fact that the rough stair entrance was filled up with a heap of small stones, on which rested the inner city wall. The burials, therefore, cannot be later than 2500 B.C., the date when this wall was erected.

Other burials have been referred to in the discussion of various cave-dwellings.

These examples are all authenticated instances of the Early Bronze Age, and indicate that the early Amorites practised much the same methods of burial as the cave-dwellers themselves—viz., the full-length burial, apparently in special cases and in some sort of enclosure, and the contracted burial.

Cave 3, III, where only the bones had been deposited in halved jars, is a notable exception of which we can offer no explanation, unless we suppose that the Amorites had carried the bones of some chief or chiefs along with them in their immigration into Palestine and deposited them there at

<sup>1</sup> At Nagada mace-heads of exactly the same shape were found buried by the skeletons in the graves of the foreign race who, I have suggested, were Amorites. These date at 3300-3200 B.C. See N.B., Plate XVII and p. 36.

Gezer, as the Israelites carried the bones of Joseph from Egypt with them to the promised land.<sup>1</sup> In this connection we may remark that Joshua did not deposit the bones of Joseph in a place of rest till he had reached Shechem, the centre of the country, and had practically taken possession of the land, or at least gained a secure footing.

It may be that here we have a similar incident in the immigration of the Amorites into Palestine, who, by the time they had reached Gezer, had practically the whole country under their control, and chose the moment of definite success for the laying to rest of their heroes' bones in the new land, as did Joshua.<sup>2</sup>

There is no evidence pointing to the practice of cremation among the early Amorites, but it should be noted that the "foreign" burials at Naqada in Upper Egypt closely resemble those of the Amorites. There contracted burials in small pottery cists, or without them, were the rule, but exceptional instances of solitary full-length burials in large pits were also found.

#### MIDDLE BRONZE AGE BURIALS (2000-1600 B.C.)

In this period both ancient caves and chambers specially excavated were used for burial.

##### *A. Caves Reused: Bethshemesh (Ain Shems), The High Place Grotto.*

INTRAMURAL BURIAL.—The high place grotto of Bethshemesh is a *natural cave* inside the city, used as a tomb of the earliest city about 2000-1600 B.C., but close to the entrance a shaft leads down to an artificial underground rock chamber which had been made and used for burial at the same period. In the next period (1600-1200 B.C.) it had also been used, and the shaft had been brought up to the II city level by masonry. The grotto measures about 19 feet by 14 feet, and at one point is only 2 to 3 feet high. Burial within the walls was thus practised by the earliest occupants of the town.

In the filling close to the high place grotto were found

<sup>1</sup> Gen. l. 25 ; Exod. xiii. 19 ; Josh. xxiv. 32 ; Acts vii. 16 : Joseph's bones.

<sup>2</sup> We may note also that the "coffin" used for the interment of these bones, consisting of halved jars placed end to end, has some resemblance to the Babylonian slipper-shaped pottery coffins of early date.

five pillars lying on their sides. These have been regarded as the standing-stones of a high place of the Israelite period, destroyed by Sennacherib. This was a Canaanite high place, which had been reused at a later date by the Hebrews.

*The East Grotto* was originally a cave-dwelling. Later all traces of the "unclean" occupation by the cave-dweller and successors were rendered innocuous by a stamped floor of limestone chips about 12 inches deep. This floor is the work of the Hebrews who used the grotto as a tomb. The pottery beneath the lime floor is Ægean and Cypriote, showing an occupation of the period 1600-1400 B.C. The pottery above the lime floor is pre-Exilic Hebrew, dating from 1100-700. The cave seems thus to have been used as a dwelling down to perhaps 1600 (MacKenzie) by the Canaanites, but it is more likely that they had used it as a tomb, and all traces of burials had been removed by the Hebrews before they reused it. There is certainly no cave-dweller ware among the pottery found in it.

The full history of the cave is probably that it had originally been a cave-dwelling of the earliest period. Later, the Amorites used it as a tomb, and later still the Hebrews cleansed it, and used it also as a tomb.

The feature in these two caves is that they were apparently used both by the Amorites and by the Hebrews for burial, though they are situated inside the city. This agrees with the tombs of the kings at Jerusalem being within the city walls.

The lime-chip floor divided it into two strata, and the floor had been penetrated by spoilers, who had robbed the tombs of both periods. This accounts for the mixture of pottery in the filling. The spoilers were Arabs, as the presence of an Arab lamp proved.

### *B. Specially Cut or Shaft Tombs.*

ROUND SHAFTS.—The specially cut tombs have a shaft entrance, usually cylindrical, but often rectangular, to about  $6\frac{1}{2}$  feet depth. As we should expect, the shaft narrows as it deepens, and thus resembles an inverted cone. A shaft  $6\frac{1}{2}$  feet in diameter at the surface is about 5 feet at the bottom. At the bottom of the shaft a door leads into the chamber, which is usually oval.

*Examples.*—Gezer<sup>1</sup> Tomb I has a shaft 8 feet deep, over 6 feet in diameter, leading to a chamber 10½ by 11½ by 4 feet high.

As the fine bronze spearheads found show, this was the burial of a warrior.

At Megiddo a similar tomb was found, the shaft being 26 feet deep, and the chamber being only 8½ by 7½ by 5¼ feet high. The entrance passage was on the west side of the shaft and was 5¼ feet long, 32 inches broad, and 24 to 28 inches high. The entrance was closed by a removable stone slab. This was a built tomb, the vaulted roof being built of dressed ashlar.

As the stone slab closing the door was too difficult to remove, a hole 8 inches in diameter had been made in it for easier insertion of food and drink offerings to the dead.

Two of these underground built tombs were found at Megiddo. The first contained bodies of two children of twelve to fourteen years, and three adults whose height averaged 64 inches. The other tomb contained more than five, and the bodies were all in *contracted position except one*. The one full-length burial lay on a bed of cobble-stones, and had gold rings with scarabs on the fingers. This was obviously the body of some important person.<sup>2</sup>

RECTANGULAR SHAFTS.—In Tomb 4 of Gezer the shaft is rectangular and measures 4 by 4¼ feet by 39 inches deep. The door from the shaft leads into a small antechamber (81 by 90 by 102 inches high), from which the sloping floor, ending in rude steps, leads into the tomb chamber proper. The door of this chamber, which measures 13 feet 9 inches by 12 feet by 7½ feet high, is a low arch in form and was blocked with stones.

The saucer-lip flask and other pottery found in it date the burial not earlier than 1400 B.C.

In another Gezer tomb<sup>3</sup> the shaft is much larger, measuring 8½ by 6 feet. This tomb is supposed to be that of an Egyptian official from the number of scarabs and other Egyptian objects found in it. The scarabs are of the XII-XIII Dynasties, or roughly about 2700-2500 B.C.

<sup>1</sup> Gezer, I, 301, Pls. 56 and 60-63.

<sup>2</sup> Schumacher, *Mitt. u. Nach. des Deutsch Pal. Verein*, 1906, p. 18 f. M., Plate 5.

<sup>3</sup> See Vincent, *Can.*, p. 217.

In Cave 28, II, the stairway leading into Chamber 2 contained many Egyptian objects of the XVIII Dynasty period, and it has been inferred from this that the cave had been used for burial by Egyptians. That the southern part of this labyrinth had been used for burials is undisputed, but there is no evidence whatever to prove that Rooms 1-4, the northern section, had been used for burial. These Egyptian objects, therefore, cannot be connected with burial, but formed a deposit of concealed treasure.<sup>1</sup>

*Tombs 3 and 252 at Gezer* are also regarded as burial-places of Egyptians resident at Gezer.

Tomb 3 contained nine scarabs, two ring scarabs, some button-base Hyksos pottery, bronze spearheads, and bronze toggle-pins, which are also Hyksos. It therefore dates between 2400-1600 B.C., as the Hyksos pottery shows.

The rectangular shaft is 8 by 6 feet, and 8 feet deep. The chamber measures about 10 by 9½ feet, and only 4 feet high.

Tomb 252 is an old cave adapted and lies over a mile away from the mound of Gezer. There are two entrances, one being a roof-hole, which was blocked. The chamber is 25 by 16 feet, and 10 feet high. The floor was covered with 3 feet depth of clay, on which lay the bones badly smashed and decayed. The contents were deposited in no order, and were of great variety and interest.

The tomb contained a spear, knife, pins, bracelet, needle, and fowl, all of bronze. Beads, scarabs, seals, one cylinder seal, lentoid vessels, Cypriote crooked-neck juglets and ware decorated with basketwork and ladder pattern, a pyx, lamps, and a fragment of an upper millstone were also found.

As all the pottery belongs to the period of the XVIII Dynasty, the contents thus assign the burial to the sixteenth century B.C., and suggest it was the burial of some Egyptian of importance. Perhaps this tomb should be assigned to the next period.

### BURIAL DEPOSITS

Burial deposits may be divided into these four classes :

1. Funerary offerings of food and drink in pottery vessels.
2. Weapons and tools, jewelry and objects of treasure or personal adornment, valued or used by the person when alive.
3. Lamps appear first about 2000-1800 B.C.

<sup>1</sup> See *Gezer* I., 140.

4. In graves of women, pins, hair-pins, needles, toggle-pins, jewelry, etc.

No trace of shrouds has so far been found. These came in at a very much later date.

The vessels found show little or no trace of their original contents, but some found at Gezer undoubtedly contained cooked mutton bones. Saucers were sometimes inverted over food-offerings, and in one instance a bronze knife was found so placed.

The large jars had all stood upright, and the presence of pointed base juglets beside them, generally known as dippers, shows that at least some of these jars contained liquid of some sort.

The contents of the jars found in graves at Naqada in Upper Egypt may be referred to.<sup>1</sup>

Where lamps were found, probably some of the jars contained oil to replenish them.

Several jars were found in the foreign burials of Naqada containing a thick fat in which was the debris of some vegetable matter, which indicated its being made from some form of palm. Cocoa-nut butter and the oil of sesamum have been suggested.

#### LATE BRONZE AGE (1600-1200 B.C.)

In this period old caves adapted continued to be used for burial, as well as newly hewn rock chambers, but no shaft tombs were made and no art displayed. The hewn chambers resemble the Hebrew tombs. In the hewn chambers a rough pillar was sometimes left to support the roof.

Entrance seems to have been by a side or front opening with roof-holes as well. Admission was gained to the tomb chamber either by a simple drop where the roof was low, by a sloping gradient, or by three or four rough steps, sometimes mere toe-grips, cut in the rock face under the entrance.

The door was always placed in the wall some height above the floor level, and concealed with a pile of stones covered with earth. No trace of movable fitted slab doors or stone-hinged doors is found in this period.

CHAMBERS.—Usually there was only one chamber, though sometimes two or even three occur. In the latter case they

<sup>1</sup> See *N.B.*, p. 39, etc. (Fat).

were all connected by doors, though occasionally the two additional chambers had each a separate entrance from the main chamber.

*Grave-pits* cut in chambers are rare, but are occasionally cut perhaps as repositories for remains of previous burials.

*Shelves or divans* are sometimes found cut in the sides, but not necessarily for the depositing of bodies as in Hebrew burials.

The bodies were placed with no idea of *orientation*.

CONTENTS.—Food and drink vessels of this period are smaller, and are usually broken, as if vessels of no domestic value had been used for burial.

*Lamps* are of more frequent occurrence, but ornaments and jewelry are rarer and of less value. Religious emblems seldom occur in this period, and the bodies were found in layers, later interments being simply placed above the earlier.

#### BUILT GRAVES : TELL FARA (BETHPELET)

At Tell Fara, which is identified with the Bethpelet or Beth-Phelet of Joshua xv. and Nehemiah xi., in 1927-28 a cemetery was cleared of the latest Bronze Age and extending over the period of the Judges to late Hebrew times, roughly from about 1400-600 B.C. The duration of its occupation and the dates are attested by the pottery and other objects found.

No detailed information has yet been published, but Sir Flinders Petrie informs me that here the graves were all built of bricks or stone. A pit was dug in the ground and the tomb built in it. All these graves were roofed over with rough stone slabs.

There were no chambers, simply this built grave.

These graves had all been plundered and the bodies badly broken up. This type of burial is, however, new to us, and seems to have been used both by the Canaanites and the Hebrews.

Cremation-pots were also found on this site, but the results of the excavation have not yet been published.

#### HEBREW PERIOD (1000-600 B.C.)

Early Hebrew burials are much the same as those of the preceding period. Old caves were adapted by cutting divans. The freshly cut chambers, however, are smaller ; and divans



or shelves on three sides of the chamber become common towards the end of the period.

Tombs of this period at Gezer show that in reused caves the side entrances were usually blocked and a roof-hole entrance substituted, which may be circular, oval, or rectangular. The diameter of this roof-hole averages only  $3\frac{1}{4}$  feet, and is always placed over or towards one extremity, never at the centre of the cave. The roof-hole is usually cut where the drop to the floor will be shortest; and the floor level is sometimes raised under it to lessen the drop. This may explain why the roof-hole never enters by the centre of the cave, where the height of the roof is generally greatest. The hole was invariably closed by a slab.

The roof-hole entrance is the more common. Where side entrances were retained, these were high up the wall above the floor level, and entrance was generally by a drop unaided; but rude steps or an inclined plane sometimes facilitated entrance. Where the side entrance occurs, the caves are old caves adapted. The "Garden Tomb" at Jerusalem is an example of a side entrance.

The diameter of these burial caves, which are mostly circular in shape, averages from 19 to 29 feet. The roof is usually flat, though occasionally dome-shaped; a pillar is often left in the centre to support the roof, as in Tomb 21 at Gezer, which has also a roof-hole entrance with *toe-grips* to facilitate descent.

POSITION OF BODY.—The bodies were laid on the divans or shelves on their left sides, with knees drawn up to the chin (*contracted burial*), and no attention was paid to *orientation*. They were simply laid on the bare rock, or on a bed of stones, and covered over with small stones and earth.

DIVANS.—In these tombs the divans were simply shelves left uncut. The *arcosolia* of Byzantine tombs were cut into the sides of the cave. The floor space of the earlier tombs was therefore more contracted. Divans varied in height from 14 to 36 inches, and were about 3 feet broad.

REPOSITORIES.—Cavities were frequently cut in and around the floor space, in which the relics of earlier burials were placed, as was frequently found at 'Ain Shems.

#### TOMBS AT 'AIN SHEMS (BETHSHEMESH)

Hebrew rock-cut tombs at 'Ain Shems have a façade with a small window-like rectangular entrance, which was closed



BUILT GRAVE—BETHPELET—JUDGES' PERIOD.



CREMATION POT IN SITU—BETHPELET.



JAR-BURIAL OF INFANT.

facing p. 167.

by a stone slab.<sup>1</sup> This portal is door-shaped, and a heavy stone more or less cylindrical was placed against the slab to keep it in position. These large stones resemble massebahs, and may be "standing-stones" appropriated from some other position. It is unlikely that they would be used with any religious significance, or because, being "dwellings of gods," they might protect the dead and keep off robbers. Grave plunderers are not usually deterred by any idea of sanctity or superstition.

Two or three steps in the rock usually led from this small entrance to the floor.

The chamber was rectangular, with divans on three sides, there being none on the entrance side, and the interior thus presents the appearance of an ordinary dwelling, underground and cut in the rock.

Tomb 5 at Mizpah<sup>2</sup> is a good example of an early Hebrew burial. This was a rock-cut tomb of the period 1000-800 B.C. The door-stone was gone. Three steps cut in the rock led into the front chamber, around the top of which ran a "passage" about 3 feet wide. This "passage" seems to correspond with the divan in other tombs, though it is here apparently at a much higher level. At the back was another chamber, with its floor on the same level as that of the front room. Two scarabs found have not yet been dated, but they may be of no real value for dating the burial. The pottery, of which a great quantity was found, sufficiently proves that it was a burial of the period mentioned.

Altogether 183 objects have been sent to museums from this tomb. Unique among these is a terra-cotta bottle-jar, which "simulates, with incised spirals, a bee-hive built up in a blunt cone by means of coiled ropes of straw. A spirally incised bottle neck on the side makes a doorway for the bees." Inside was found a wax-like deposit which, when chemically examined, may prove this to have been a food-offering of honey for the use of the dead.

This object in itself is of great interest and value apart from burial customs, as showing that bee-farming was practised and hives made of straw coils used at that early date. Another piece of pottery represents a swan with the wings outlined on

<sup>1</sup> *P.E.F. Annual*, [1912-13, p. 64, Plate 21. This "window" entrance may be seen on the so-called Garden Tomb at Jerusalem.

<sup>2</sup> *P.E.F. Q.S.*, January, 1930.

the back in red and black bands, supposed to be Cypriote work or local imitation. Scores of small black juglets so characteristic of the period 1000-600, and equal numbers of saucer lamps without stump bases, were found, as well as an assortment of the well-known types of early Hebrew ware, including a brazier or incense-burner, as some call it.

This cemetery promises further material of much earlier Canaanite periods.

ESCHATOLOGY.—The tomb was the dwelling of the departed spirit. As it was assumed that life in the next world would be simply a continuance of life here, the same sort of dwelling, similar furnishing, the same equipment, food, drink, and any possessions particularly prized or habitually worn and used by the departed, were buried with the body.

In particular, a large supply of lamps is found, which increase in number in the later periods; and, in view of this, I think that some of the larger vessels must have contained oil for refilling these lamps, though no provision made for lighting them has been noted. No lamp-wicks are recorded.

The early Hebrew ideas of immortality and of the future life appear, therefore, to be the same as prevailed in Egypt, Babylonia, and among the Canaanites around them, so far as we can judge from their burial customs.

### JAR-BURIALS OF INFANTS

Jar-burials of infants have been found all over every stratum from the earliest to the latest times. They are found in the following positions and circumstances:

- (a) In walls or under walls.
- (b) Under foundations and occasionally beside a completed building—*e.g.* at the south-west gate of the west fort at Ta'anach, where the burial cannot have had anything to do with the foundation of the fort, but was a sacrifice at the completion of the work.
- (c) Near a high place or sacred enclosure.
- (d) In the moat between the two walls of the fort at Megiddo—a foundation or beginning sacrifice.
- (e) In House A, at Jericho, 10 inches under the floor, dating between 1800 and 1400 B.C.
- (f) In House B, at Jericho, with a button-base jug adorned with a fine "lilac" pattern (*J.*, p. 204), dating 1800-1600 B.C.

(g) At Ta'anach, as mentioned under (b) (T., p. 105).

(h) At Ta'anach. (See *Ta'anach*, p. 106.)

(k) In Cave 2, I, the "crematorium" cave at Gezer.

(l) Twenty such jar-burials were found at Ta'anach (see T., pp. 35-38).

(m) Many were found also on the high place at Gezer, and at Tell-el-Hesi.

Of these, (a), (b), and (d) are certainly foundation or other sacrifices. The burials near a high place may also be sacrifices, though this is not certain.

The jar-burials at Jericho (e), Houses A and B, are simply burials of infants newly born, which had been put away in the easiest way possible, buried there, perhaps, for luck, as some suggest. The jar-burial of an infant at the south-west corner of the west fort of Ta'anach, close to the outlying gate-tower, is, I think, an instance of a "completion" sacrifice of a child, offered up when the building of the gate was finished (see 1 Kings xvi. 34). In this jar-burial the child is considered to have been about ten years of age, which makes Hiel's sacrifice of his oldest and his youngest sons quite possible. The sacrifices were not necessarily newly-born infants.

(k) In Room 7 of Cave 28, II (Gezer), jars were found containing bones of infants; and in Cave 2, I, a newly-born infant had been buried in a jar which is very early ware and is described above. The jar had been broken at the mouth to admit the body and the mouth closed with a saucer. Some tiny beads were found in the filling, part of a necklace. All this is exactly what we found at Naqada.

The first example may be doubtful, but the second appears to be a cave-dweller interment.

It is unnecessary to suppose (as is suggested) that this infant had been sacrificed at the dedication of the cave "cemetery."

Jar-burial of infants was the regular custom in the cemetery at Naqada, 6000-4000 B.C., and I found hundreds of them in Goshen cemetery of the period 1500-600 B.C. The method was the same all through. After the body was inserted, the jar was filled up with sand or earth, one or two small jugs being added with it occasionally. The mouth, broken if necessary to admit the body, was closed with a small basin or saucer.

The jar-burials of infants which are described by Macalister as found on the area of the high place at Gezer (G. II, 402)

exactly resemble those which we found at Naqada, except that we found always a small saucer on the mouth of the jar, but no trace of fire on them. We found also occasional beads and pendants. Otherwise also the details are identical. Yet there must be an interval of some 3,000 to 5,000 years between them, if Macalister's dating for the high place at Gezer is correct. There can be no question of sacrifice at Naqada. They are simply burials.

The twenty jar-burials of Ta'anach were found near the rock altar, and it is disputed whether these were infant sacrifices or not. There is no evidence to indicate what they were. In all probability these were burials simply placed there because of the sanctity of the ground, and probably by people who lived on the spot or had a preference for the sacred ground. Special parts in a cemetery were often set aside for infant burial, especially in later times, as I found in the cemetery of the ancient town of Goshen in Egypt. There hundreds of jar-burials of infants were discovered in one spot, with no adult remains near them. The pots used in these dated about 600 B.C., and there was nothing to indicate why so many were placed in the same spot. It might have been the result of some epidemic, or it may be that that corner was the children's corner at that period.

The cemetery of Goshen had been in use successively from 1500 B.C., and jar-burials of infants were found in the earlier sections deposited alongside of adults.

Jar-burials of infants were found near the high place, both at Gezer and Megiddo, but here there were also "standing-stones." As there were no standing-stones near the rock altar at Ta'anach, some have decided that the twenty infant burials in jars at Ta'anach cannot be the remains of infant sacrifices.

The whole area of the high place at Gezer proved to be a cemetery of newly-born infants. Because of their association with the high place, and because at least two showed marks of fire, these infants have been regarded as the victims of sacrifice.<sup>1</sup> The bodies had been placed in large amphoræ with pointed bases. Apparently the efficacy of infant sacrifice had consisted, on this supposition, simply in the slaying of the infant, the mere letting of the blood flow, and not in the burning of the bodies. The body was inserted head first, and

<sup>1</sup> See *Gezer* II, 402.

usually two or three small vessels—often a jug and saucer—were placed inside the mouth of the jar, or close to the jar outside. None of these small vessels contained food or organic matter of any kind; and no beads, charms, or other ornament was found in the jar. Every jar was filled with earth after the contents were inserted. The bones showed no trace of mutilation, and the earth was filled in at the burial.

At Gezer the jars were all found lying on their sides.

There is no doubt that the earth was filled in at the time of burial, just as we found both in prehistoric child burials at Naqada, and in infant jar-burials at Goshen in Egypt. There a bowl was usually placed over the mouth of the jar to close it, and this would have prevented the filtering in of earth. Similar bowls were found closing some of these jars at Gezer, though not usually.

In the high place of Gezer there is no doubt whatever that these were infant burials, but as to whether the infants had been first slaughtered as sacrifices, and then buried in the sacred precincts, there is really no definitely conclusive evidence, and the point must be left open.

At *Tell-el-Hesi*,<sup>1</sup> in the "cemetery" outside the city enclosure, Flinders Petrie found similar jar-burials. The jars contained bones, small saucers and jugs which were imitation or genuine Cypriote "bil-bils" and had been filled with sand. This sand-filling was often white, not the brown sand of the cemetery itself. The jars had one or two handles, pointed bases, and stood upright. Some think these were infant burials, which seems very likely; but no bones were found that could be called human, and one bone was identified as part of the lower jawbone of an ass. Petrie, therefore, concluded that this had probably been a Hebrew place of sacrifice, in which animals had been offered and the bones afterwards buried thus. Only one little wire circlet was found which might suggest child burial. He assigned the jars to the early Hebrew period, and quotes Micah i. 13 for idolatrous practices of Israel connected with Lachish.

That these jars contained offerings of some sort is, perhaps, favoured by the fact that they stood upright. At Gezer, and in other places where jar-burials of infants have been found, the jars lay prostrate. The filling of clean white sand is also notable, but may be simply a local accident.

<sup>1</sup> *T.H.*, p. 32.



Macalister concluded that these were undoubtedly jar-burials of infants, and thinks the small bones of infants might easily be mistaken for those of other animals. The conditions certainly point to their being jar-burials of a well-known type, and we may safely set them down as such; but whether they were ordinary burials or burials of "sacrificed infants" there is nothing to determine.

These jar-burials at Tell-el-Hesi probably date from the earliest occupation by the Amorites (prior to 2000 B.C.), certainly as early as the thirteenth century B.C.

With regard to the burial of infants under the floor of a dwelling and within sacred precincts, Driver quotes an interesting passage from Frazer<sup>1</sup> to the effect that among primitive peoples—*e.g.*, in India and Australia—there is a belief that the souls of the dead may be reborn into the same family, and infants are often buried under a threshold or near a house in this hope.

Frazer therefore suggests that the skeletons found in high places and sacred precincts are those of infants, who died a natural death and were buried in sacred ground in the hope that, with the aid of the Divine Power, they might again be born into the world as their mother's children.

**SACRIFICE OF THE FIRST-BORN.**—For the practice of sacrificing the first-born in Old Testament times see 2 Kings iii. 27, where Mesha offers up his oldest son to Chemosh when pressed by the Israelites. Compare also Micah vi. 7, "Shall I give my first-born for my transgression?" words which imply that the practice had gained a hold among the Hebrews. Exodus xiii. 12-13 legislates that the first-born of man and beast shall be set apart to Jehovah, but the first-born of man "shalt thou redeem"—*i.e.*, by substitution of money or other value.

The instance of Hiel (1 Kings xvi. 34) is quoted above. In this instance the architect of the work, Hiel, himself had to supply two children for sacrifice. The oldest son was sacrificed at the beginning, and the youngest at the completion of the work of restoring the walls of Jericho.

This is interesting, for the passage thus informs us that "completion" sacrifices were offered as well. The child burial at the south-west gate of the fort of Ta'anach had

<sup>1</sup> See *D.S.L.*, p. 69, note; Frazer, *A.A.*, 2nd edit. (1907), p. 82 f.

thus been a sacrifice offered when the last gate was set up and the work finished.

There is no doubt, however, that infants were sacrificed and buried under the foundations of a building at the commencement of the work. These are known as foundation sacrifices, though apparently older children and even adults were also sacrificed. I am quite convinced also that they sacrificed an infant at the completion of the work and deposited it in a jar-burial near by. These we may call "completion" sacrifices. This fact is contributed by the O.T. narrative 1 Kings xvi. 34.

## INFANT SACRIFICES

### SUBSTITUTES

I. At Gezer (II, 433, Stratum III, 30) of the Middle Bronze period was found a curious substitute for infant foundation sacrifice. A large jar (24 inches without the neck) was found containing 11 figurines of human beings, 1 in bronze and 10 in silver. The bronze figure was  $2\frac{1}{4}$  inches and the silver  $1\frac{1}{8}$  inches high, and both are made of thin sheets. They are crude representations of human figures.

This was probably a model of a foundation sacrifice, and is unique. There were also four small saucers of V shape and very shallow.

II. LAMP AND BOWL.—The substitution of the lighted lamp, extinguished by an inverted bowl placed over it, in place of an infant sacrifice as a foundation deposit is well known.

At Gerar Petrie found three of these in the stratum of Thothmes III (about 1500 B.C.) (see Pl. 6, A, B, C). Besides these found at Gerar, a lamp and bowl deposit was found in a house dating 2000-1800 B.C. at Gezer (see G. II, 195-6, on Houses). In addition to the sacrifice the foundation deposit included objects belonging to the period (see G. II, 433, Fig. 514).

Lamp and bowl substitutes have been found at Tell-el-Hesi (*M. M. C.*, page 84), the Shephelah Tells (*E.P.*, 151), but perhaps the best and fullest material came from Gezer.

These are not found before 2000-1600 B.C., and are rare till about 1200 B.C. They are common from 1000-600 B.C.,

the Hebrew pre-Exilic period, but in the post-Exilic (600-100 B.C.) they are rare.

*Position.*—In every stratum they are found in corners of rooms or under thresholds, usually against the lowest stone of the wall, but not under the foundation.

Many houses had none. They seem intended to secure luck for the new home, as the infant sacrifice or burial in the floor may have been.

Sometimes it is a lamp with bowl above it; sometimes a lamp with a bowl above and one below; or a lamp with two bowls above and one below, or two below and one above.

The largest number found in the deposit is seven. Practically all consist of a lamp with a bowl above and one below. The variations consist in the addition of more bowls, or occasionally a lamp-stand.

*Features.*—(a) The pottery used seemed new; (b) the bowls were covered by a lime plaster to make them non-porous. This suggests they contained liquid, blood, wine, water, or more probably oil.

Macalister favours "blood," as blood and fire combined give the idea of sacrifice. They show that the people were alive to the waste of life in the sacrifice of infants, if not the cruelty of it.

The lamp and bowl, however, never succeeded in replacing the original rite of infant sacrifice.

#### GRAVES OF CHILDREN

Two quite different types of child burial were found at Megiddo.<sup>1</sup> Both may be examples of what Frazer suggests.

In these graves the floor was paved with cobble-stones, the interstices being filled with ashes, charred wood, earth, and rubble.

**BURIED-ALIVE SACRIFICE?**—On this floor lay in one case a child's body on its back (Fig. 26), with the knees drawn up towards the chin and the arms raised. The position of the body almost suggests that the child had been placed there and left to die. The body as it lay measured 22 inches. It was surrounded by a rough wall of three courses of field stones, to a height of 16 inches.

This grave was in the room of a house, and had been made immediately after the room was finished.

<sup>1</sup> See *Megiddo*, p. 60 f., Figs. 75 and 65.

The other grave was in the corner of a room in the north fort, and had been made after the wall had begun to crumble away. Here the knees were contracted, but the arms were pressed close to the sides. A small jug had been placed at

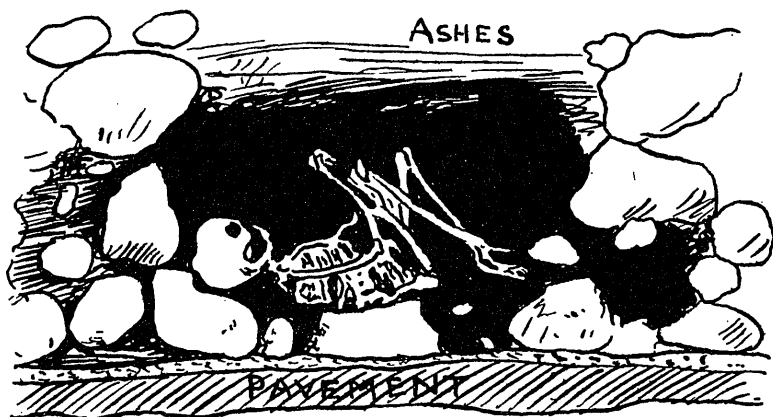


FIG. 26.—FOUNDATION BURIAL.

each side of the body. Round the body was built a massive circular structure of large stones, slightly dressed, each stone about 12 to 16 inches high and  $2\frac{1}{2}$  feet long. The enclosure measured 64 inches in diameter, and was filled with earth and fragments of pottery.

### HELLENISTIC PERIOD (550-100 B.C.)

In the Hellenistic period from the sixth century B.C. downwards rock-tombs are "for the first time" well cut and squared. The doors are also square cut and rebated, for a closing slab to fit in.

The bodies are not deposited in the chamber, but receptacles, known as *kokim*—*i.e.*, narrow shafts or tunnels, are cut into the sides of the chamber, and into these the bodies were placed head first. The entrance to the *kokim* may be round, square, or triangular, as at Bet Jibrin, and occasionally it is also rebated for a closing slab, as, *e.g.*, in tombs at Bet Jibrin. At Gezer *kokim* were not closed. Usually each was large enough to hold only one body, though occasionally capable of holding two, and sometimes, as at

Gezer, they were so short that an ordinary full-length burial would project into the chamber, unless the body was contracted. These short kokim, however, may have been unfinished, or used as repositories for bones of former burials.

Sometimes the kokim were on the floor level of the chamber, but in the best tombs, as at Jerusalem, where there were divans, the kokim entered on the level of the surface of the divan, these divans being about 12 inches high and 24 inches broad.

As a rule, there are nine kokim to each chamber, three on each of the three sides, there being usually none on the entrance side, where the door enters on the outside face of the rock.

Sometimes there is a double row of kokim, though this is rare. The "Tombs of the Kings" at Jerusalem is an example, but there was no instance at Gezer. As they stand these cannot be the tombs of the kings, since kokim came in only after kings ceased to be.

At Gezer<sup>1</sup> pairs of adjacent kokim were found projecting into the tomb chamber by the prolongation of the partition between them in the form of a dwarf wall. This may be simply an expedient to evade deeper cutting into very hard rock, and it seems to be unique in Palestine.

In some tombs there are only two kokim a side, six in all, and one tomb at Gezer had eight, four on each of two sides, while the wall facing the door had openings leading to other chambers. Where there is rock-depth for them, kokim are found also on the door side. It is clear, therefore, that not numbers, but the space available, and the needs of the family, decided the number of kokim to a tomb.

Arcosolia and kokim are not found associated until the Byzantine period. There are numerous examples at Jerusalem, very few at Gezer.

CHAMBERS.—Usually there is only one chamber, but sometimes two and even three are found, though never more than three at Gezer. In this case the additional chambers are entered by rebated doors leading off the main chamber. Subsidiary chambers sometimes have kokim, but are generally plain rooms for storing ossuaries.

DOORS.—The usual door is a slab of stone made to fit exactly into the doorway, and occasionally the slab itself is rebated. The slab was probably cemented in when the tomb was closed.

Only one swinging hinged stone door was found at Gezer.

<sup>1</sup> See *Gezer* I, 395 *seq.*; III., Pls. 56-59.

The hinges consist of stone pivots at the top and bottom corners of one side. These pins revolved in sockets cut in the threshold and lintel. Either an artificial and separate lintel or threshold had to be supplied for the "hanging" of these swing doors in position. Hinged stone doors, however, are quite common elsewhere.

Circular rolling-stone doors do not occur earlier than the last century B.C., the Roman period.

These tombs are mostly cut in the rock on a sloping hill-side, and the rock face does not always present a suitable surface for a door. This difficulty was overcome in two ways.

1. In small tombs a stairway, 5 to 8 feet deep, is cut in front of the place where the door is to be. This cutting supplies a vertical face for the door, which is made on the level of the lowest step, and by filling up the stairway with stones and earth the tomb was effectively concealed. I found a good example of a stairway entrance of this kind on Gebel Baqi'a, a cultivated hill-top a mile or two south-west of Es-Salt, and in this tomb over the top of the door were cut five columbaria, or pigeon-holes, for cinerary urns, each about 7 inches square. These columbaria were visible as soon as the stairway was cleared of the earth and stone filling.

2. The other method was to cut a sort of open court into the hill-side, the depth naturally increasing inwards. This is the usual method in the tombs in and around Jerusalem, but at Gezer only the most pretentious and costly tombs were so made. Over this forecourt a structure of masonry was erected, but in every case except one the masonry had been stolen for modern buildings. Slots were cut in the rock to receive the foundation stones, as in the walls of buildings at Samaria and the tower-hill of Es-salt (Transjordan). These tombs with a forecourt are obviously tombs of the wealthy. This cutting did not slope inwards, but supplied a horizontal floor for the court as well as a vertical front for the entrance to the tomb proper.

Gezer, Tomb 176, is a good example of a three-chamber tomb of this period.<sup>1</sup>

The front of this tomb is a large square open court over which a mausoleum had once stood, which has now disappeared. From this court a door with arched top leads into a chamber with four kokim on each of the right and left

<sup>1</sup> Gezer III, Pl. 58, 17; *Deposits*, Pl. 114.

sides. The floor is very uneven and unsmoothed. The kokim are on the same horizontal level, yet those on the right are 39 inches above the floor while those on the left are only 19 inches above it. Two doors in the back wall lead each into a small chamber. In these rooms, though they resemble kokim, the receptacles are only 33 inches long, and are probably meant to hold ossuaries.

The chamber on the left has seven of these receptacles, four on the left and three on the back wall, with a square hollow in the floor centre. That on the right has six receptacles, three on the right and three on the back wall.

The contents of this tomb indicate occupation in Greek, Roman, and Arab times.<sup>1</sup> The most interesting object is the

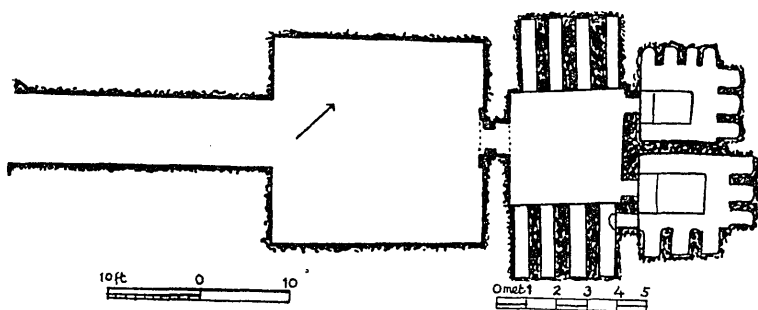


FIG. 27.—GEZER TOMB 176.

small incense altar or stone box,<sup>2</sup> with the Greek letters ΓΑΝ and the drawing of a duck, a ship, and two unrecognisable designs on its sides, found in the left small chamber. Twenty-five glass bottles of the type common in the Roman period were found ranged along the wall in the small chamber to the right. These measure from  $1\frac{1}{4}$  to  $6\frac{1}{2}$  inches in height and are all much broken.

Byzantine lamps, one with the usual Greek inscription,  $\phi\omega\varsigma \chi\rho\iota\varsigma\tau\omicron\upsilon \phi\epsilon\nu \pi\hat{\alpha}\sigma\iota\nu$ <sup>3</sup> ( $\chi\hat{\upsilon}$  contracted), were also found in this chamber. It had been reused in Byzantine times.

The tomb had thus been made originally in Hellenistic times, and reused again and again in the Roman, Byzantine, and Arab periods, as the presence of Arab painted potsherds shows.

<sup>1</sup> See *Gezer* I, 371.

<sup>2</sup> *Gezer*, Pl. II 4, 1.

<sup>3</sup> "The light of Christ has shone for all."

## ROCK-TOMB WITH FORECOURT AT MIZPAH

Though burial within the precincts of the town was quite usual both in Canaanite and Hebrew times, as is proved by excavations at Bethshemesh, Zion, and elsewhere, the usual practice was to select a slope outside of the city and use it as a cemetery. This is confirmed by the discovery in 1929 of the cemetery of Mizpah on a ridge north of Tell-en-Nasbeh. It may be that important personages were buried in rock-tombs within the city and ordinary burials deposited in a cemetery outside.

At Mizpah, Tomb I, is a fine example of a rock chamber with a forecourt. At the east end of this court, chiselled out of the rock, a door led into the chamber. Into a rebate in this door a stone slab was carefully fitted and sealed. It was found in position. Close to this door on the north side of the court a smaller door closed by a slab in exactly the same way led into a small cavity probably intended only for a child burial. Both door-slabs were found in position; the tomb had been robbed probably soon after burial and again carefully closed up. This accounts for the absence of any valuables in the tomb as well as broken fragments otherwise unexplainable. The tomb had been used first about the eighth to seventh century, as pottery of that period with eleven saucer lamps found in it show. Among the lamps only one had a stump base, which confirms the dating, as stump bases became common about 600 B.C. It had been reused in Hellenistic times about 250 B.C., as the pottery proves. Among objects of this period were an alabastron and a small globular vase of fine thin ware which is an excellent reproduction of a pomegranate in every detail. Rings, fibulæ, brooches and ear-rings were also found. The small side chamber contained a child's skeleton with the bones of an adult, which had probably been thrust in when the tomb was robbed. In the second burial the bones of the earlier deposit had been only slightly disturbed, but almost no bones of the later burial remained. The tomb must thus have been robbed soon after the Hellenistic burial, and left carefully closed up.

Another Hellenistic tomb with a covered forecourt 6 feet square and about 6 feet high was found later.<sup>1</sup>

See *P.E.F.Q.S.*, January, 1930.



## TRANSJORDANIA

Near Es-Salt and adjacent to Kinisit Sara are several kokim tombs where the front of the sloping rock was squared and a decorated façade made over the door. This method of simply squaring the face of the rock to the necessary extent was followed also in some of the tombs on Gebel Gadur, the western hill of Es-Salt in Transjordan. In these cases there was no trace of any masonry structure, and in fact there was no room for such a structure on the slope. The making of slots in the rock for receiving the foundations of the structure is reminiscent of the similar foundation slots found at Samaria and on the castle hill of Es-Salt.<sup>1</sup>

At Gezer one chamber was found which had been cut into a series of apses, from each of which kokim radiated.

*Tomb-robbing* must have been prevalent from early times, as is evident from the devices adopted to deceive and mislead thieves. In this period false doors, imitation kokim passages, concealed closing-slabs and other ingenious devices, are employed, especially at and around Jerusalem, though no example was found at Gezer. The practice would naturally prevail most near to important centres where the richest loot might be expected, and precautions would be taken accordingly.

## CONTENTS OF TOMBS

The outstanding feature of Hellenistic tombs is the large number and variety of lamps found in them, but otherwise the usual practice was observed, and pottery, jewelry, needles, pins, tools, weapons in iron and bronze, nails and such like, are found as in older burials, showing that the eschatological ideas of this period were much the same as those of the Canaanites.<sup>2</sup>

Food-offerings disappear in this period entirely; but a curious innovation of the period is the depositing of cosmetics.

The three outstanding features of this period (550-100 B.C.), therefore, are the introduction of kokim, the great numbers of lamps, and the introduction of cosmetics with food-offerings omitted.

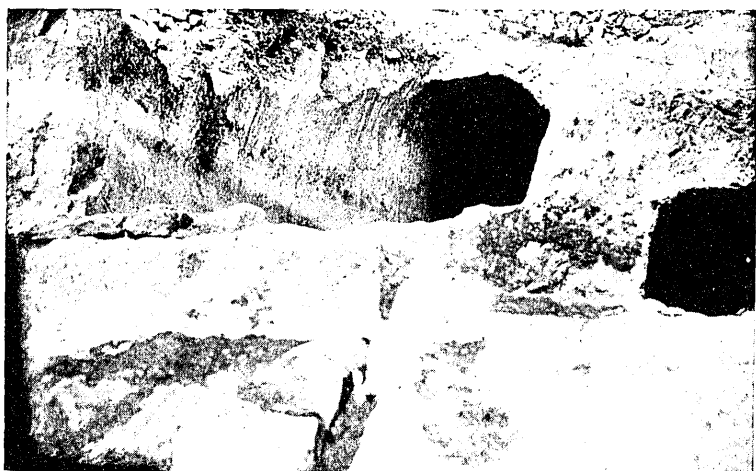
Dr. S. Daiches suggests that the cosmetics were deposited simply to overcome the smell of decaying matter.

<sup>1</sup> See *P.E.F.Q.S.*, January, 1928, p. 31, by J. G. D.

<sup>2</sup> See *Gezer* III, Pls. 92-101.



KOKIM--TOMB AT KINISIT SARA (ES-SALT).



TUNNEL CAVES ON OPHEL (ZION).

"SUPPOSED TOMBS OF HEBREW KINGS," THE PLASTER IS BYZANTINE OR ARAB.

facing p. 180.



THREE AND FOUR-LETTER STAMPS.



LEADEN OSSUARY—FOUND NEAR JERICHO.

facing p. 181.

## OSSUARIES

When the flesh had decayed, and the tomb had to be used for a fresh burial, the Hebrews of this period, instead of collecting the remains of a former burial and depositing them in a cavity as repository, placed the bones in a limestone box with a lid of the same material. These boxes, because of their contents, are known as ossuaries, or bone boxes, and were deposited in the tomb chamber, or in an additional chamber.

At Gezer it was invariably found that ossuaries were never found in tombs which had no kokim. At Jerusalem, however, ossuaries are found in tombs where there are only arcosolia and no kokim. These are of later date than the Hellenistic period.

The ossuary was intended for the bones of only one person. Only two were found at Gezer which could have held more. These two measured 40 by 14 by 12 inches. The average size at Gezer was 24 by 9 by 8 inches, being a little shallower than those found at Jerusalem. Some measuring only 12 inches long must have been intended for children.

Sometimes the large bones are carefully arranged in the bottom and the others above them. Usually no care or design was shown in the filling.

CONTENTS.—In repositories the accompanying objects were deposited with the bones, but in ossuaries nothing is found but bones. A small blue glass bottle and an occasional bronze bracelet found at Gezer show that such objects were mere accidents in ossuaries.

LIDS.—At Gezer many had no lids. Others had "flat, hog-backed, or roof-shaped lids."

ORNAMENTATION.—The sides were plain, or ornamented with painted or incised lines. The paint used is a dull brick-red ochre, and the designs are rough frets, zigzags, a wreath, rosettes, or other geometrical patterns.

Incised designs are almost invariably a "sexfoil in a circle, made by stepping round a compass with fixed radius," and occurring only on one end and one side. The foils are sometimes painted red. These slightly resemble the rosette pattern (*cf.* G. I, 399, Fig. 203).

Occasionally the name of the person whose bones are inside is inscribed on the ossuary. This practice was perhaps more



THREE AND FOUR-LETTER STAMPS.



LEADEN OSSUARY FOUND NEAR JERICHO.

Excav. 1911.

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common at Jerusalem than at Gezer. For inscribed ossuaries see G. I, 347, 349.

Where ossuaries were piled up on the floor of the tomb chamber, their own weight and the damp speedily disintegrated them, the limestone being so soft that even the weight of its own lid is sometimes enough to crush it.

Some ossuaries are actually found deposited in kokim, thus defeating their own purpose.

A LEADEN OSSUARY.—This ossuary is the property of Mr. Hughes of Jerusalem. It is made of lead of by no means uniform composition, being soft in parts and quite hard in others, perhaps through bad admixture of some alloy.

The box was cut out of one sheet of lead, the sides and ends being cut exactly to pattern, being afterwards doubled up into position and soldered together at the corners with the same material. The soldering was done on the outside and is quite visible. It is rather roughly done. The ends are rounded on the top to accommodate the shape of the lid, which is similarly rounded. The lid is a more skilful piece of work. It is not only rounded, it is also concave in shape, sinking half an inch lower at the centre than at the ends. There is no trace of handles or hinges.

The ossuary measures 13 inches long by 6 inches broad (outside measurements) and is  $4\frac{1}{2}$  inches deep. The lead averages about  $\frac{1}{4}$  inch in thickness.

It was found by some workmen in making a road near Jericho. The exact spot is understood to be close to the cairn or heap of stones which, according to one popular tradition, is no less than that piled over Achan and his lawless spoil after he and his family were stoned to death (Josh. vii. 24).

This cairn is situated at the extreme east end of the valley, which has been identified as the Valley of Achor; and is passed close by travellers who journey to Jericho by the old road on the edge of the Wady Kelt. It was excavated, as I understand, some twenty years ago, but nothing was found in it.

The decoration is quite elaborate. The various details have not been punched out from the inside, but must either have been formed by pouring the molten lead into a mould, or by carving away the surrounding thickness, leaving the figures in relief. The irregularity of the design seems to point to the latter as the more probable.

It consists of rosettes, small drinking-cups with two handles

and very narrow base, and what look like Ionic pillarettes (candlesticks, perhaps?) mixed together with no fixed order or design. Two diagonals of the cord design cross the lid, and a similar carved cord had run round its edge.

The lid has a flange of  $\frac{3}{4}$  to  $\frac{7}{8}$  inch depth, which overlapped the ends and sides of the box proper. On one side this flange is completely wasted away.

I saw no signs of an inscription. There is a lead urn shaped like a large vase or pottery jar in the Museum of the British School in Jerusalem, which is regarded as an ossuary. It has no decoration whatever.

The decoration of this ossuary here described assigns it to the Greek or Græco-Roman period.

The pillarettes measure 3 inches in height and about  $\frac{1}{2}$  inch in breadth. The abacus is  $1\frac{1}{4}$  inches broad and about  $\frac{1}{2}$  inch deep. The larger rosettes are  $1\frac{1}{2}$  inches and the smaller  $1\frac{1}{4}$  inches in diameter. The cups measure  $2\frac{1}{4}$  inches in height and  $2\frac{1}{4}$  inches across the handles.

### BYZANTINE PERIOD (A.D. 350-650)

In this period the rock chambers are carefully cut and arcosolia first appear.

ARCOSOLIA.—The distinguishing feature of the period is the arrangement for the reception of the dead. Kokim are practically abandoned, and shelves with an arch over them, like arched divans, are cut in the three sides of the chamber. These are named arcosolia, from their shape. So few tombs are found containing both kokim and arcosolia that there is good reason to conclude that these few are adaptations of Hellenistic tombs, the arcosolia being added later.

At Gezer the arcosolia are, as a rule, wider than those found at Jerusalem, as if intended to receive more than one person. Frequently they are arranged round the sides of a small rectangular bay, with vaulted roof cut at right angles to the chamber, though usually there are just three arranged round the chamber itself.

At Jerusalem in Christian tombs the cross is frequently found on the walls, but very few at Gezer showed this symbol. Two, however, bore a rude representation of the seven-branch candlestick, and another had a fish. None of them have inscriptions of any kind on the walls. The door-lintel is just



under the roof, and three or four steps lead down to the floor. There is no instance of a roof entrance in tombs of this period, either at Gezer or at Jerusalem.

At Bêt Jibrin, however, it is quite different. There the usual entrance is a square shaft, closed by long slabs, which are never found at Gezer.

SHROUDS.—*The body* was covered with a shroud and was laid at full length on the shelf of the arcosolium. No ossuaries were used, and successive burials were simply placed above the previous ones, except where occasionally the bones were removed and heaped upon an empty arcosolium.

No attention was paid to orientation, and even where head-rests were provided, the feet were often found resting on them. This seems to indicate that the head of a later burial was placed over the feet of the one under it, so that the leg bones were later found on the head-rest of the burial below it.

CONTENTS.—The objects deposited are practically the same as in the previous period, glass vessels, etc., however, becoming much more numerous, though few were found at Gezer (see *Gezer* III, Pl. 123). "Christian emblems and small copper coins are common."

The eschatology of the early Christian period, so far as indicated in burials, thus remains much the same as in the previous periods, though perhaps not the same meaning was attached to the objects deposited with the dead. Even today we bury rings and other objects valued by the dead with them, though these bear no eschatological significance.

### PITS CUT IN ROCK

There is a type of tomb which I do not find mentioned by any previous writer, and of which I found many examples on hill-slopes and hill-tops near the ruins of old towns in Transjordan and also near the modern village Kefr Yasif, a few miles north-east of Acre, and Beitin at Ramallah.

It is a trough tomb excavated in the surface of the rock. These tombs measure about 6 to 7 feet in length and 20 to 24 inches in breadth. They vary from 3 to perhaps 5 feet in depth, though these measurements may not be accurate. The examples shown from Kefr Yasif had been covered with a thick coat of finely smoothed plaster.

These are simply ordinary full-length burials in pits cut in

rock, instead of earthenpits. The upper edges were rebated for the reception of a closing stone slab which fitted exactly into the rebate. I have never been fortunate enough to find one of these burials complete, all that I saw having been opened and plundered; but from other indications I have set these down to the Roman period, they being generally close to the ruins of a Roman town. Kefr Yasif is itself built over the ruins of the town, which is supposed to be the remains of the village of Josephus, as the name implies. Near to it are still shown the remains of the house of Josephus' sister, which he says was built not of stone, but of glass, so that it glistened in the sun like diamonds.

It is quite plain that a glass factory had existed here, and many lumps of glass with sand or clay adhering to it were handed to me. It seems that the house spoken of had been decorated or faced with such lumps of glass, and those handed to me may have belonged to it.

The tombs described in the foregoing pages are practically all rock-cut chambers, and the only exceptions are the few built tombs at Megiddo and Bethpelet. It is quite apparent that, where rock was at hand and easily worked, rock chambers were preferred.

In Southern Judea, however, as at Tell-Fara (Bethpelet) the tombs are built tombs, since rock could doubtless be had only by deep excavation.

It may be noted also that where tombs are rock-cut chambers on a hill-side opposite the town, the idea of a cemetery in our sense is impossible. It must have been something of a scramble sometimes to get access to these tombs and deposit the dead, notably, *e.g.*, at Gebel Gadur, near Es-Salt in Transjordan, where many of the Hebrew tombs are cut into the rock on its steepest face, probably to make plundering more difficult.

In Egypt, cemeteries in the sense of portions of the desert selected for burial and pit-graves built or unbuilt, are the usual form of burial arrangement, rock-cut tombs being more or less the property of royal, rich, or influential people.

In Southern Judea, and perhaps also in the plains elsewhere, as at Megiddo on the Plain of Esdraelon, cemeteries seem also to have been the rule. The city of the living had its city of the dead somewhere close by, and pit-graves, brick-built or stone-built in the interior, were probably quite usual from early times.

As a rule the Hebrews, though they sometimes buried within the city walls, excavated their rock-tombs on a hill-slope near to their city. The presence of rock-tombs on one hill-slope is often a sure indication that the hill opposite or near had had a settlement on it, and, on the other hand, the absence of any indication of burials near a site is a sure proof that that site had not been occupied.

IX

WORK IN STONE AND METALS



## WORK IN STONE AND METALS

### FLINTS

THE worked flints found at Gezer cover the whole period from the cave-dweller age down to 600 B.C. Though bronze was used at least as early as 2500 B.C., and iron was known and wrought at 1350 B.C., flint was never really superseded. The introduction of these metals, however, gradually caused deterioration in the working of flint. The best examples known belong to the Palæolithic and Neolithic times, and recently a large quantity of wrought flints were found in a wady near Tell-Fara (Bethpelet). There flint was used because bronze and iron were still too expensive for them. No other really fine examples of early date have so far been found in Palestine, nothing for instance to compare with the beautiful flint knives, harpoons, and other implements found at Naqada<sup>1</sup> in Upper Egypt in the burials of the foreign race.

At Gezer, Jericho, Ta'anach, Megiddo, the flints found are all of the same class and type. These are mostly small knives or scrapers, or mere flakes. At 'Ain Shems none were found. At Tell-el-Hesi flint implements were found in great quantity, from top to bottom in every stratum. These are also chiefly small two-facet knives, but sickle flints<sup>2</sup> were common in all periods. At Gerar one of the features of Petrie's discoveries was the magnificent collection of flint sickles of the Hyksos age (2000-1600 B.C.).

On Ophel the flints which I found were all knives or mere flakes except one very fine fabricator or small chisel.<sup>3</sup> In the Shephelah sites excavated, the flints are limited to the same types—knives, flakes and scrapers.<sup>4</sup> At Tell-el-Ful Albright found none, it appears.

So far, therefore, Palestine has not yielded a rich harvest in flint tools. Those which have been found may be classified as follows :

<sup>1</sup> N.B., Pls. 68-76.

<sup>2</sup> P.E.F. *Annual*, IV.

<sup>3</sup> M.M.C., p. 123.

<sup>4</sup> E.P., Plate 71.

## THE CAVE-DWELLER'S POCKET-KNIFE

1. KNIVES WITH TWO AND WITH THREE FACETS.—Sometimes one edge only has teeth, sometimes two. These teeth, resembling a saw-edge, are made by careful chipping.

Occasionally plain edges are found, but these may be simply flakes, or unfinished knives. Some of these knives are  $8\frac{1}{4}$  inches long, but the average length is about 4, and even 2 inches is quite common. In breadth they vary from about  $\frac{3}{4}$  inch to 1 inch.

The smaller knives were set in wooden hafts longitudinally, and resemble a comb with very short teeth. This is proved by the fact that the part set in the wood retained its dull surface, while the projecting part was polished by use. In one case of a double-edge knife both edges were polished. The knife had been set in a handle and the edges exchanged as one became blunt. The resinous material used to fix the knife in the handle occasionally remains on the surface of the knife.

The longer knives were used without a haft, or thrust lengthwise into a cleft stick, resembling modern knives.

These are simply the pocket-knives of the cave-dweller or his successors, used for odd purposes as occasion arose.

2. POINTED KNIVES OR SPEAR-POINTS.—The teeth project towards the point, as they were used for thrusting or cutting with an outward movement. There are no really good examples from Palestine (see *Gezer*, Pl. 138, 31, 3).

3. Knives when "chipped" were used as saws (see *Gezer*, Pl. 138, 20, 33; 139, 14, 17, 18, 19, as examples).

We might, in fact, describe all flint knives with notched teeth as saws.

4. SICKLES.—These were made by fitting a series of flint knives with notched edges into a piece of wood the shape of a sickle. The knives had thus to form a concave and naturally each had a slightly concave, in place of a straight, edge. The back was thick, and the knife-edge projected about  $\frac{1}{2}$  inch from the wood. The angle to which they were cut is usually about 80 degrees. That the jaw-bone of some animal originally suggested the shape of the sickle is not likely, but it is quite possible that jaw-bones fitted with three or four flint knives may have been used as weapons.

*Gezer*, Pl. 128, 9, is an example of a sickle reconstructed from knives found here and there; but the finest collection

of sickles yet discovered was found by Petrie at Gerar in 1926-27.

The specimens known to us so far from Palestine date from 2000 B.C. downwards. We cannot say sickles were not used by the cave-dwellers, but we have found no examples that can be assigned to them.

At Naqada<sup>1</sup> a few specimens of sickle-teeth were found, so that sickles were known also to the Naqada civilisation.

A very large quantity of sickle-teeth was found at Tell-el-Hesi.<sup>2</sup> No wood or resin was attached to these, but the line to which the setting extended is quite perceptible, the notched edge being polished with use and the blunt back edge being dull. The notches in these average eleven or twelve to the inch, and they are notched in the same way as knives.

Some of these sickle-teeth were  $1\frac{1}{2}$  to 2 inches or more in breadth, and they were sunk in the wood to a depth of 1 to 2 inches even. Others are much narrower (*e.g.*, Nos. 38, 39, *N.B.*, Pl. 71; and *Gerar*, Pl. 16, shows a complete sickle of teeth not more than  $\frac{3}{4}$  inch broad).

At Tell-el-Yahudiyeh, which was the Hyksos fort Avaris, in Egypt, it is noteworthy that no flint sickles were found.

In the various Tells of the Shephelah recorded (in *E.P.*, Pl. 71), no examples of sickle-teeth were found, though we should have expected them to be in use there. None are recorded from Ta'anach, 'Ain Shems, Tell-el-Ful (Gibeah), Ophel, and Megiddo. In the collection of flints from Jericho three appear to be sickle-teeth, and one from Ta'anach<sup>3</sup> is distinctly concave.

So far, therefore, as our present knowledge extends, flint sickles began to appear about 2000 B.C., the period when the Hyksos first made their presence felt. As in the case of other flints, though they are not discarded nor entirely supplanted by bronze and iron, they generally deteriorate in workmanship and finish as iron displaced them, so that the worst specimens in most sites belong to the later dates. At 400 B.C. they disappear entirely, and are never found in Hellenistic times.

5. FLINT WEAPONS: SPEAR-POINTS AND ARROW-HEADS.—No flint spears or arrow-heads have so far been found which can be assigned to the cave-dweller in Palestine, but this absence of evidence cannot be regarded as conclusive proof

<sup>1</sup> *N.B.*, Pl. 71, 38, 39, 41, 42.

<sup>2</sup> See *M.M.C.*, pp. 123 and 195.

<sup>3</sup> *Ta'anach*, Pl. 7.



that the cave-dweller did not make and use such weapons. He must have been a hunter ; and, even allowing that he used pits or other traps, spears would have been necessary and arrows as well.

At Gezer no specimen was found that could be dated earlier than 2000 B.C. A spear-point with a tang was found in Stratum III of that period.<sup>1</sup> The other examples shown on Pls. 138-139 of Gezer were found in Strata IV and V, 1400 B.C. downwards. One barbed arrow-head (G., Pl. 139, 18) found in Stratum V is older than any bronze arrow-head found in the city.<sup>2</sup> Two spear-points or arrow-heads with tangs were found by Bliss at Tell-el-Hesi<sup>3</sup> which date about 1800 B.C.

Among the oldest flints found at Jericho there are two spear-points with barbs, both badly broken.<sup>4</sup> These are assigned to the late Neolithic period, 2500 B.C.; and of those shown on Pl. 7 of Ta'anach, several appear to be spear-points, notably the first three.

6. BORERS.—These are triangular in shape. At Gezer one was found in the Early Bronze stratum dating prior to 2000 B.C.,<sup>5</sup> and a finer example came from the lowest stratum or rock surface,<sup>6</sup> dating thus prior to 2500. Seven examples occur among the oldest flints from Jericho.

7. CHISELS.—These are of comparatively frequent occurrence. The best examples at Gezer<sup>7</sup> were found on the rock surface.

A very fine fabricator or small chisel, flaked all round, was found by myself on Ophel in a cave-dweller burial cave, an adjunct of the great cave. One exactly similar was found at Jericho.<sup>8</sup>

These chisels from Ophel and Jericho date about 2000 B.C., if not earlier.

8. SCRAPERS.—These are found very generally in every site, though they seem to disappear entirely by 1000 B.C., when iron instruments probably took their place. They were used sometimes for skinning animals and sometimes for smoothing soft limestone. Usually they are of a flat oval shape, such as can be used with thumb pressure. The cutting edge is carefully bevelled. Some fine specimens were found at Gezer, Jericho,

<sup>1</sup> G., Pl. 139, 3.

<sup>3</sup> *M.M.C.*, p. 124, Nos. 225, 256.

<sup>5</sup> G., Pl. 139, 2 and 20.

<sup>7</sup> G., Pl. 138, 29 and 35.

<sup>8</sup> *P.E.F. Ann.* IV, p. 25. Fig. 18. *Jericho*, Pl. 25, 128.

<sup>2</sup> 2 G. II, 125, Pl. 139, 18.

<sup>4</sup> *Jericho*, Pl. 23, 40 and 41.

<sup>6</sup> J., Pl. 23, Nos. 33-39.

Tell-el-Hesi, and a few on Ophel. The best specimens come from the rock surface, and belong to the earliest period—*i.e.*, prior to 2000 B.C. At Gezer several had curious marks of ownership scratched on them.<sup>1</sup>

9. FLAKES.—Flakes of irregular shape are also found all over Palestine. Some of these may have been used as scrapers. Many are mere chips, often found in quantities, indicating the site of a flint tool factory. The edges of these irregular flakes are usually plain, though occasionally notched.

10. CORES.—Some from which small ribbon-knives had been struck were found at Gezer. The best example is shown on G., Pl. 139, Fig. 2.

11. FLAKING.—Flaking is usually confined to the edge which is intended to cut, but occasionally tools are flaked all over, as, *e.g.*, the fine chisels from Ophel and Jericho mentioned above. This is a great contrast to the fine flaking of knives, spears, and harpoons found at Naqada, which are sometimes flaked from the centre both towards the back and towards the edge with most wonderful precision of depth and width.

According to Macalister's conclusions from Gezer flints in the period prior to 2000 B.C., knives, pointed knives, and flakes are of commonest occurrence. Weapons like spear-points or arrow-heads are absent or very rare; and sickle-flints are unknown until 2000 at the earliest. Chisels and scrapers also he considers rare or unknown in the earliest period, but this is very doubtful.

The cave-dweller seems to have made his own flint tools, but in later times flint factories were quite usual, and flint-working became a trade by itself.

When bronze began to be used, flint was still retained, doubtless on account of cheapness; but gradually it was relegated to a very secondary position, and the workmanship deteriorated accordingly. In all probability, the flint-working trade disappeared, and the users of flint tools had again to make them for themselves as in cave-dweller times. Generally speaking, the poorest specimens belong to the latest periods, and the most beautiful workmanship is a guarantee of an early date, except perhaps in Southern Palestine, where it appears the people were unable to purchase or work bronze and iron, and reverted to the use of flint implements, which they made

<sup>1</sup> G. II, pp. 125-126.

with considerable skill, as proved by excavations at Lachish and Bethpelet.

At Jericho, in the lowest levels, though not quite on the rock surface, knives, scrapers, pointed triangular borers, spear points with barbs, flakes, and one axe,<sup>1</sup> were found.

From the levels coinciding with the period of the city walls (2500 to 2000) Sellin found one-edged knives, bowie-knives (daggers) or spear-points, two-edged knives, two-edged daggers, flakes and harpoons.

Of the next period, which he calls Canaanite, he found many two-edged knives, small three-edged knives, one small dagger, sickle-teeth, one flat scraper, two small chisels worked all over, and an oval hatchet. The chisels and the hatchet belong to an earlier period.

The wrought flints from Gezer and Jericho are by far the best collection yet discovered in Palestine, apart from the flints of Gerar and Bethpelet. Those from other sites are merely duplicates, and have been summarised above.

Gerar is remarkable for the fine collection of sickle-teeth, which Petrie has reconstructed and shown in photograph on opposite page. In the plates of the volume which he has kindly sent me long before publication, I find no other flints shown.

After a survey of the material at our disposal, one comes away with the feeling that the flint-working of Palestine was of an exceptionally poor class, though future discovery may alter this opinion.

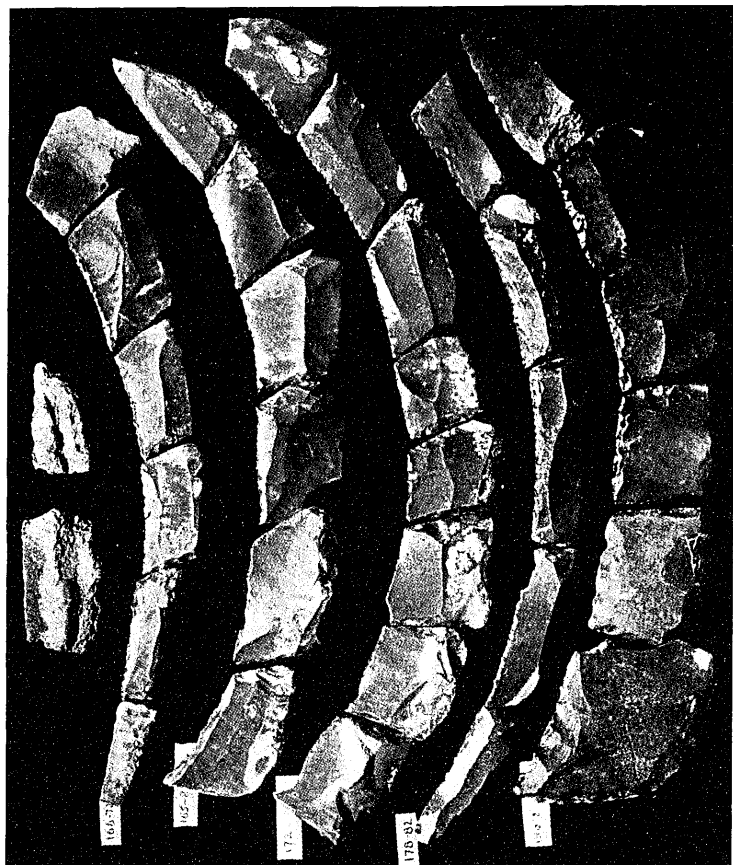
#### FLINT TOOLS FROM BETHPELET

Since I wrote the above words, the finest collection of flint tools yet found in Palestine has been discovered at Tell-Fara (Bethpelet), thus bearing out my statement that excavation had not yet revealed all that is to be known of Palestinian flints.

In the stream bed of Wady Ghuzzeh near the mound Tell-Fara, there is a great mass of rolled flints, which are now disturbed only once or twice a year when a torrent rushes down from the Beersheba basin. The boys employed on the work searched this ground for several miles and brought in hundreds of flints every day. The best were kept, and photographs of the various types are given here.

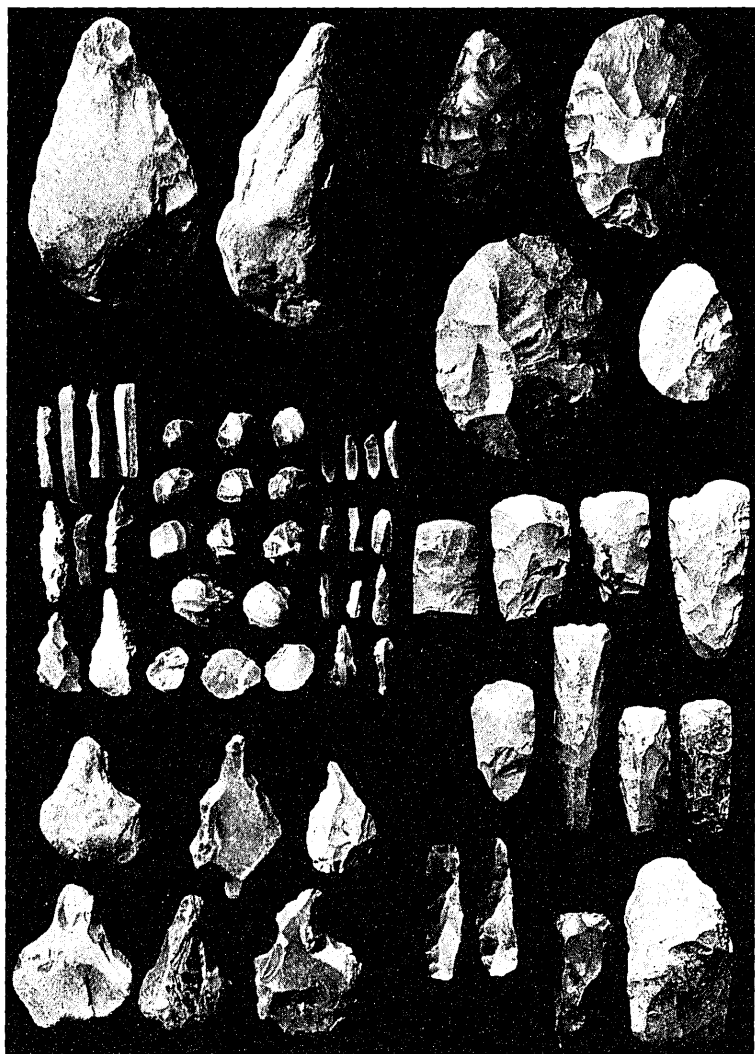
Some of the finest specimens came from a silt bed. The various forms of flint pick occur—long, thick, flat-sided,

<sup>1</sup> *Jericho*, Pl. 24, 42.



FLINT SICKLES—GERAR.

facing p. 194.



FLINT TOOLS--BETHPELET.

facing p. 195.

heavy, and short. These were probably used for digging up roots for food in winter. The "ovate" types with sharp edge all round were probably used for cutting green food in summer.

Besides these, the collection includes axes, which are of rather less frequent occurrence; choppers; cores; flakes of early date; sliced flints, otherwise called donkey's hoofs, and Levallois flakes; skew-handle flints with a large flat back for pressure by the ball of the thumb and a one-sided hold to gain purchase for boring with the point; handled flints with rounded end for gripping; narrow points; rounders for throwing, and the rudest type of "bashers" for breaking purposes. The collection supplies a remarkably wide range of Palæolithic types.<sup>1</sup>

On account of its cost or the difficulty in procuring it, bronze seems never to have been used in Southern Palestine; and though iron was in use in the thirteenth century, it was not used in Southern Palestine till the eleventh century, when it had become comparatively cheap. The inhabitants found it cheaper to continue the use of flint, and so it is perhaps to the comparative poverty of Southern Palestine that we owe the preservation of these types of flint tools in this fine collection. Though these continued in use till the eleventh century, they are none the less Palæolithic and Neolithic types and are to be classed accordingly.

Thus we find that the Neolithic Age persisted in Southern Palestine down to the eleventh century B.C. The fact that the people were dependent on flint explains the remarkably fine workmanship of these flints, though naturally great numbers have been smoothed and rounded by continual rolling in the stream.

Some of the smallest flint flakes found Petrie thinks may have been used as arrow-points, but no other trace of archery was found, and no trace of other flint weapons, except perhaps one piece of a dagger with a handle.

The flints of Bethpelet are all tools or implements, almost without exception. Other southern sites point to the same use of flint down to a late period, and in them also the flints found are mainly tools.

At Lachish flint tools were found through all the strata, notably sickle-teeth. At Ophel and in the Shephelah sites

<sup>1</sup> Petrie.

the same types were found, chiefly tools. At Gezer tools far outnumbered weapons. At Jericho in the earliest level only tools were found. In the earliest Amorite period weapons predominate, and in the next period again tools are most numerous. In the northern forts—Megiddo, Ta'anach, etc.—flints are not of frequent occurrence, but, of those found, tools are rare and weapons predominate.

It is a safe inference, therefore, that flint was replaced by bronze and iron at a much earlier period in Northern Palestine than in the south, and from this we may gather that Northern Palestine was a much richer country than the southern hill country and plains.

### THE NAQADA FLINTS

The Naqada flints are of the greatest value because the series contains "examples of the highest art in flint-chipping now known,"<sup>1</sup> but they are of very special interest to the student of Palestinian archæology, if we are right in regarding them as the work of Amorites who had immigrated to Egypt from Palestine in the seventh millennium B.C. They are also of indisputable antiquity, and confirm our statement that the finest examples of flint implements belong to the earliest periods.

The collection includes hoe-blades, thumb flints, scrapers, sickle-teeth with part of the setting still adhering to them, and a quantity of oval-shaped implements worked all over, varying from  $1\frac{1}{2}$  to 7 inches in length.

These all came from the debris of the town and around it.

The finest specimens were found in graves, where they had been laid with the dead. Among them is a great variety of triangular flakes which are practically one-edge knives with a thick back; a number of beautifully flaked, finely finished and notched knives; a large number of fish-tail lances or spear-points probably used in hunting for hamstringing the prey as it ran; thrust-knives with the teeth set forward; arrow-heads; and flint rings or bangles.

There are several types of arrow-heads. One is the earliest example known of an arrow-head with a tang (*N.B.*, Pl. 73, 69); another is "shouldered" and heart-shaped (or leaf-shaped) (Pl. 72, 58). Barbed forms are more common than

<sup>1</sup> See Spurrell, *N.B.*, p. 57.

these, the barbs curving inwards (Pl. 72, 55, 57). Some are fish-tail shape, like the lances (Pl. 73, 65, 70). Many even of the larger fish-tail lance-points may have been used as arrow-heads. They are so thinned down as to be quite light.

The method of notching is described below, but the number of knives and blades reduced to a very fine edge with no notching really exceeds the number of those that are notched, and notching is not used more in the case of any one type than in any other.

The flint rings or bangles are interesting. One (Pl. 75, 100) is  $2\frac{1}{2}$  inches in diameter and only  $\frac{3}{20}$  inch thick. In making them nodules of flint found in the limestone were used. The boss was detached where possible, and the outer ring finished by grinding and polishing to form a bangle.

Occasionally, doubtless, rings were found, with the bosses already detached. The grinding and polishing was an easy matter, seeing that these people used emery.<sup>1</sup>

No flint knife has yet been found in Palestine that exhibits the skill and finish of those found at Naqada (*e.g.*, N.B., Pl. 74). On that plate, No. 86 is over 9 inches long and about  $2\frac{1}{2}$  inches broad. At its thickest part it measures only  $\frac{3}{8}$  inch. The flaking is beautifully regular, and the teeth even and very fine. The point is curved, and the back about  $\frac{1}{16}$  inch thick. Spear-heads and javelins of the same refined workmanship were found among the remains of this foreign race in Egypt, whom we identify with the Amorites, or as kindred to them.

Another example of a knife from Naqada is 15 inches long,  $1\frac{1}{2}$  inches broad, and only  $\frac{3}{8}$  inches thick at its thickest part (Pl. 72, 52).

An idea of the skill to which the Naqada flint-workers had attained may be gathered from the following facts :

The knives and javelins had first been ground, and we know that these foreigners of Naqada possessed and used emery of various hardness and grinding power.<sup>2</sup> This accounts for the marvellous thinness of their weapons and knives. After grinding, they flaked them carefully, to remove all traces of grinding. The flaking is often as fine as  $\frac{1}{200}$  to  $\frac{1}{300}$  inch deep. The back of the knife was bevelled and smooth. The notching was done by a flake of some very tough stone, and one notch is made towards one side, while the next is made towards the other, exactly as we "set" the teeth of a saw to give it clearance

<sup>1</sup> See Spurrell, N.B., p. 59.

<sup>2</sup> See Spurrell, N.B., p. 58.



in cutting. In these fine knives and weapons the teeth or notches are sometimes only  $\frac{3}{100}$  to  $\frac{1}{100}$  inch deep. If the weapon is intended for thrusting, the notches are set accordingly—*i.e.*, facing the point. If it is intended merely for cutting—*i.e.*, in a knife—they are set as above described.

Often the knife was finally polished smooth by a substance which found its way into the hollows of the flaking. The substance used must therefore have been skin or soft wood, with perhaps Nile mud, but certainly not sand.

All these knives or spears were set in wooden hafts or handles, and the substance used to fix them often adheres to the blade. The extreme refinement of notching, and the excessively careful finish all over appear to have been rather for show than for utility.<sup>1</sup>

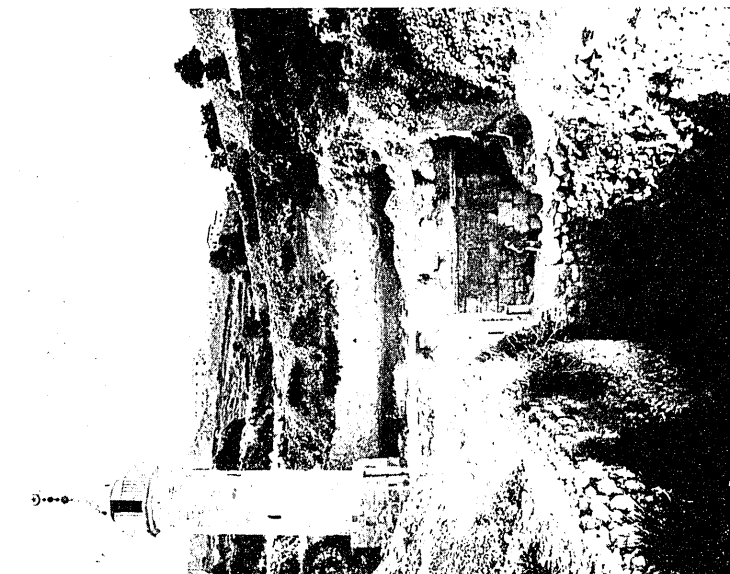
Alongside of these beautiful specimens we found at Naqada also numberless examples of the same sort of knives, with the same rough finish, flaking, and notching as those found in Palestine; but if these fine tools of Naqada are the work of the Amorites, similar specimens must be found in Palestine and Syria, when we come to excavate Amorite sites. Those found at Naqada are the finest examples extant from any land so far.

If these people were Amorites from Northern Syria, all this is of the greatest interest and value, for the Amorites afterwards took possession of Palestine, and they or their descendants are responsible for the civilisation of Palestine from 4000 down to 1200 B.C. Since we have found so many links of connection between the pottery of Palestine prior to 2000 B.C. and that of Naqada, it is very surprising that so far Palestine has yielded no flints that can in any way be compared to those of Naqada.

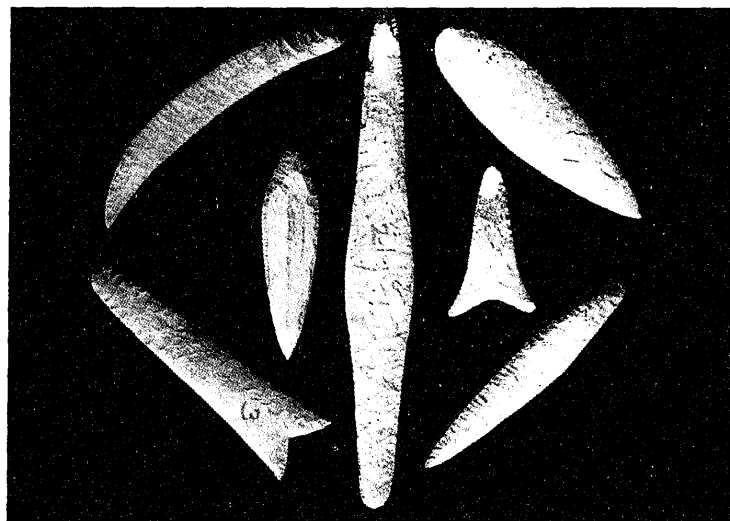
One explanation of this fact may be put forward. Up till now no really ancient Amorite stronghold has yet been excavated; and those known to have been founded by Amorites which have been examined, such as Tell-el-Hesi (Lachish) do not date further back than 2000 B.C. Thus, our present knowledge of the Amorite in Palestine is largely limited to the period when bronze was already in use and flint was taking the second place.<sup>2</sup> The flints recently found at Tell-Fara (Bethpelet), though belonging to the III Bronze Age, exhibit

<sup>1</sup> See Spurrell, *N.B.*, pp. 57 and 59.

<sup>2</sup> Palestine is equally barren in Palæolithic flints.

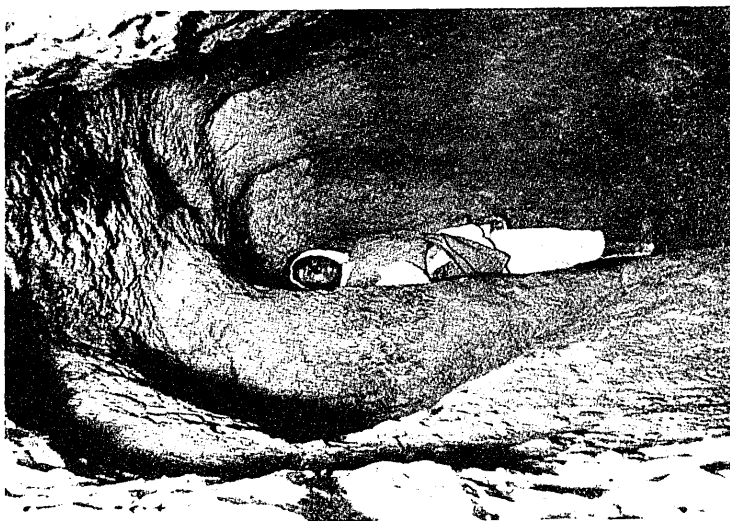


THE POOL OF SILOAM BEFORE 1949.



FLINT KNIVES AND LANCES—NAQADA.

facing p. 108.



SILOAM TUNNEL

WHERE THE TWO GANGS MET.



GIHON—CAVITY FULL

ENTRANCE TO SILOAM TUNNEL IN BACK.

facing p. 199.

workmanship closely akin to the Naqada flints, and so prove that flint was largely used and finely wrought in Palestine at a much earlier date.

In Joshua xi. 6, where is recorded defeat of the King of Hazor by Israel at Lake Merom, we find a reference to a practice in war which is interesting. The words are, "Thou shalt hough their horses." Only in fighting Hazor and its allies are horses mentioned, and already some special weapon must have been used.

Now among the flints of Naqada and flints from other sources there is a fish-tail flint spear-head which at Naqada we could set down only as a weapon for hunting antelopes, and it had been thrown so as to strike the heel of the animal pursued and cut the tendon. There is no doubt that there is in Joshua xi. 6 a reference to this type of weapon, which the Israelites may have copied from the Amorites and used against them thus in war.

Very probably the weapon used was this fish-tail spear made of flint or iron. The passage inclines me to think that our ignorance of flints in Palestine is no guarantee that they were not in daily use, and that excavation will by-and-by reveal the fact that as fine flints were made there as elsewhere (*cf.* also 2 Sam. viii. 4).

## QUARRYING AND STONE-DRESSING FROM EARLIEST TO HEBREW TIMES

QUARRYING METHODS.—As the limestone rock is generally very soft while it remains underground, it is quite easily worked. If it has been exposed to the air it becomes very hard indeed. It was no difficult matter, therefore, for the cave-dweller to make or to extend his cave even with flint chisels, hammers, and wedges of wood. When bronze tools came into use it was an easier matter still. The marks on the rock in Solomon's quarries and on the rock surface in Ophel show how early quarriers cut a groove of some inches width round the block which they wished to extract, and then forced it away from the rock with wedges. Frequently the block came away with a rough boss projecting in its centre.

The masonry of Ahab at Samaria and Herodian masonry are both characterised by a dressed margin with roughly bossed centre, and this form of masonry doubtless had its

origin in this accident of their quarrying. Occasionally the block came away with a hollow centre, leaving the boss on its bed; but this method of quarrying was not known in Neolithic or early Bronze times, nor even in Jebusite times, as the Jebusite walls at Jerusalem plainly show.

In these early times they seem to have had no elaborate method of quarrying, and the shape of the block was fortuitous. It was largely a matter of hammering. The limestone is sometimes so soft that, if blocks were laid in position as soon as quarried, they welded together and no mortar was needed. When they dried, they became a solid hard block like concrete. This softness of the rock also explains how with very inadequate tools they were able to scarp the rock under city walls and leave it with a wonderfully dressed surface at quite an early period.

The Jebusite tunnelling on Ophel and around Gihon, described later, seems to have been carried out mainly by hammering, chisels of flint and bronze being also used.

DATING ROCK CUTTINGS.—So far I have not been able to obtain definite evidence for allocating rock cutting or rock scarping to different periods. We know, for example, that Hezekiah cut the Siloam tunnel, and the surface-dressing on its walls is his work, except where it was heightened in Hellenistic times at the south-west end. We know, too, that the Jebusite made the first part of the Siloam tunnel and many other tunnels around the spring Gihon; but when Hezekiah reused it he had it redressed, and thus direct evidence of Jebusite stone-dressing was lost to us.

In the city walls, which we have attributed to the Jebusites at Jerusalem, the stones are all rudely shaped and hammer-dressed. The entrance to the large cave which I cleared on Ophel (see vol. i.) is artificial in part at least, but shows only hammer-dressing. We may assume, therefore, that careful quarrying of well-shaped blocks, and surface-dressing of stones with comb-pick or pointed pick were not practised in the Neolithic and Bronze periods—*i.e.*, prior to 1200 B.C., and probably not for many years after that date until the time of Solomon and Rehoboam.

In the earliest times stones were hammer-dressed and roughly quarried. In excavating caves the cave-dwellers used flint tools, or simply hammered pieces off the rock. In dressing they simply used the hammer, and employed the chips

to fill interstices. This I found on the Jebusite walls uncovered in Ophel. The cave-dweller quarried, but did not build. His quarrying was confined to tunnelling and enlargement of caves.

## TUNNELLING

As we have seen in foregoing chapters, the Canaanite tunnelled and excavated the rock for dwellings and other purposes, and later the Hebrews were no less expert in the making of cisterns, conduits, and tombs.

One of the most interesting, and perhaps somewhat confusing series of tunnels, is that in the rock around the spring Gihon.

### THE ROCK CUTTINGS AROUND GIHON SPRING

The Gihon spring is now identified with the intermittent spring known today as the Virgin's Fountain, and among the Arabs as the "Mother of Steps."

It lies in the bottom of the Kidron Valley almost straight down the slope from the tower and bastions of the east wall above described, but at a level nearly 300 feet below the level of the ancient Zion. A horizontal tunnel leading straight to beneath the centre of the city would have to be at least 50 yards long, and a vertical shaft from the end of such a tunnel leading right up into the city would have to be at least 80 yards in perpendicular height. The city walls practically overshadowed the spring, but the spring was always just outside of the city.

The importance of Gihon spring and the part it played both in the selection of the site and in the history of the stronghold of Zion is evidenced by the number of tunnels which surround it. The rock in its vicinity is a veritable warren of tunnels, most of which were attempts, either by the Jebusites themselves or the Kings of Judah, to make the water accessible from the interior of the city. In 1910-11 Père Vincent was allowed the opportunity of studying, measuring, and photographing the spring cavity itself as well as these series of tunnels, when they had been cleared by Captain Parker, and it is to him that we now owe our exact knowledge of them.

Altogether there are eight tunnels, complete or unfinished, around the spring, and Vincent has given a correct plan of them to scale in Pl. 2 of his book, *Jerusalem sous Terre*. These tunnels had practically all been blocked up with masonry, as



being no longer needed or in use, with the exception of Hezekiah's Siloam tunnel.

For the better understanding of this network, it will be best to begin with Tunnel VI, with its accompanying cuttings, which was the water-system in use when David took the city, though the first part of Tunnel II with III and IV probably preceded it.

**TUNNEL VI: THE JEBUSITE WATER TUNNEL AND SHAFT, KNOWN AS WARREN'S SHAFT AND TUNNEL.**—Tunnel VI is the series known as Warren's Shaft and Tunnel, and now generally regarded as the work of the Jebusites, certainly the work of someone who preceded Hezekiah.

When Hezekiah set about making his Siloam tunnel, he found this short tunnel already existent and continued it down to Siloam.

Tunnel VI opens out from the north-west corner of the cavity of the spring, and runs somewhat tortuously for about 36 feet almost due west. There it turns due north for about 25 feet and enters an old cave which was thus converted into a reservoir. (This cave measures about  $8\frac{1}{2}$  by 8 feet.)

From this cave they cut a vertical shaft towards the surface, which, though vertical, is by no means straight. Vincent says there is such a twist in it near the top, and the opening is at parts so narrow, that it was next to impossible to draw water from it with buckets, without emptying the buckets in the process. He and his men, however, tried it and were able to draw up the slimy mud from the bottom with buckets, though they made a dreadful clatter.

Vincent mentions that the sides of this shaft were rubbed to a perfectly smooth surface. This means that the Jebusites drew the water, not with "clattering buckets" but with skins of sheep and goats. He notes also that the sides of the shaft are pitted with holes due simply to there having been soft and hard parts in the rock. These holes are by no means regular or placed opposite to each other. Though they could have afforded facilities for climbing the shaft with great difficulty, they were not intended for foot and hand grips, but purely accidental.

This vertical shaft (J) is over 40 feet deep; and considering its smooth surface, its narrowness and the irregular occurrence of the holes in the sides, sometimes at large distances apart, would have been no easy matter to climb. At the upper



opening of the shaft there is a platform on which the women had stood to draw water; and in the rock-roof above the opening, when it was first discovered in 1867, there was an iron ring, evidently for passing the rope through to let down and draw up the vessel used. In some mysterious manner this ring had entirely disappeared in 1910; but this ring explains the absence of rope-marks on the edge of the mouth of the shaft.

*The Rock-Cut Passage.*—From this vertical shaft the sloping passage or dragon shaft cut in the solid rock runs up into the interior of the city. On account of the impossibility of removing houses, the exact spot where it opened into the city has never been found. The sloping passage as explored is over 56 yards in length.

Like some of the modern and ancient streets of Jerusalem, it might be described as a succession of stairs, mixed with fairly easy-going surfaces and occasional perpendicular drops of a few feet depth. The average height of the passage aimed at throughout is about 100 inches. Its maximum breadth is nearly 10 feet, or about 116 inches. At points it narrows to 6 feet. It is a rough underground street.

In addition to shaft J described above, there is a second shaft (B) much further up the hill, which also led to a well or reservoir, and by which also water had been drawn to the surface.

This shaft is 135 feet above the bottom of the Kidron Valley and about 100 feet beneath the surface level of the city interior. Its opening was covered by a semicircular arch only half built.

This arch is about 13 feet in length. These two shafts are the same work, done with same tools and same methods, and under the same difficulties. But J is smoothly polished and apparently the other is not.

*A Large Cave.*—The sloping passage continues southward beyond the shaft J and ends in an artificial rock scarp about 11 feet in height. When Vincent climbed this scarp he found facing him a "thin rock partition" with an opening leading into a large cave. This cave had been enlarged by man, and measures 43 feet the longest way. A natural curve brings the passage to an opening in the eastern face of the hill. The sloping passage thus ends in the entrance to this ancient cave. The connection of the rock-cut passage and the cave, Vincent

thinks, is purely accidental, but it should be noted that the opening into this cave on the Kidron slope led also into this water passage.

On the other hand, it is possible that use was made of this cave and its entrance in the making of the sloping passage for throwing out the debris.

The marks on the walls of the passage show that they were finished with hammer and chisel, not with a sharp-pointed pick. The rough work of excavation was probably done with hammer, wedge, and chisel.

If Joab entered the city by the water passage, it is far more likely that he gained admission to this great cave by its entrance on the hill-slope, and entered the water passage from the cave, than that he climbed the vertical shaft J, which is practically unscalable.

The projections in shaft J are most highly polished, which shows that the polishing was due to the rubbing of the skins used in drawing water.

Shaft B does not show much polish, and seems to have been less used. Where the water of this shaft B came from Vincent does not suggest. It was probably a natural accumulation of rain in a hollow of the rock, and had proved an unsatisfactory source. The dragon shaft did not by any means follow a straight course. The passage is practically a semicircle, and doubtless this is due partly to the makers' desire to follow the softest parts of the rock, but principally to avoid the steepness of a stair straight down to, or up from, shaft J. At a later date, when the passage ceased to be used, the second shaft (B) was filled up, and shaft J opening was covered with a slab.

The passage itself also got gradually filled up, but was used as a hiding-place long after it ceased to be used for drawing water, as were also the caves. Here and there people had made nooks to live in, and in one of these Warren found three glass vases, which Greville Chester dated as Arabic. The passage must, therefore, have been open and accessible in Arab times, and used as a hiding-place by persecuted Christians or political refugees.

One noteworthy feature is the dressing of the stones of the arch over shaft B. They were combed with a comb-pick about  $2\frac{1}{2}$  inches broad, having very fine teeth, which made twenty-three striations at one stroke. This recalls the Jewish

pre-Exilic stone-dressing found, *e.g.*, in the palace of Samaria (Vincent).

From the end of Tunnel IV (A) Tunnel VI had been cut back toward the spring from west to east, as is shown clearly by the line of the pickaxe work.

At L and G the makers thought of cutting round and entering the spring on the north side, but abandoned the idea. They entered the spring at F; and originally there was a step in front of F which was intended to check the mud and rubbish from flowing into Tunnel VI from the cavity. The makers of Tunnel VI therefore started work at the end of Tunnel IV and worked both ways; but this indicates that IV is older than VI. Had they begun work in the spring itself, they would have been overwhelmed by the first flow.

About 8 feet short of the cave into which Tunnel VI enters, Hezekiah dammed Tunnel VI with masonry, which does not quite reach the top of the cutting. Behind this dam (R), therefore, we can see the original Tunnel VI exactly as it was made by the Jebusites. From R right into the cave Tunnel VI is only a *hole roughly cut*, with neither regularity nor beauty; and these words probably describe correctly the whole of Tunnel VI as it was left by the original workmen. What improvement was made on it is the work of Hezekiah.

Shaft J shows the same want of taste and finish. The makers had used rough tools and followed the soft parts of the rock, making little attempt to cut off hard projections.

This Tunnel VI, with its vertical shaft and rock-cut water passage into the city, is "the upper water-course of Gihon" which "Hezekiah stopped" (2 Chron. xxxii. 30).

TUNNEL I.—The No. 1 tunnel or conduit is partly hewn in rock and partly built of large blocks of stone, covered over with such a powerful plaster that it looks the work of yesterday.

Its orifice is about 35 feet beneath the stairhead of the modern entrance to the spring, and 32 inches below the level of the actual mouth of the spring. The orifice is really in the bottom of the large reservoir H-H', which is underneath the modern stair entrance. When the spring overflows, a current still runs down this canal stronger far than that of the Siloam tunnel, because its orifice is below the level of the concentrating cavity of the spring. The orifice had been dammed, but the masonry blocking it badly wants strengthening.

About the year 1901 two English missionaries (Hornstein and Masterman) walked or crawled through this tunnel to within some 60 yards of its mouth. Shick traced it to the southernmost point of Ophel. Vincent was able to carry his examination of it only to within 45 yards of the point reached by the missionaries.

From the direction in which it runs and from the fact that Shick traced it to the southern end of Ophel, it is clear that Tunnel I is the first attempt made to bring the water of Gihon to a pool inside the city. The makers evidently could not tackle the problem of cutting a tunnel right through the rock as Hezekiah did later. Instead, they seem to have aimed at running the tunnel along the outside edge of the rock where they could better control its direction. Where did this tunnel lead to?

There is little doubt that it led into the "lower pool," which is known now as the old Pool of Siloam, or a similar reservoir, inside the walls of the city. On this supposition the old pool dates from the same period as Tunnel I. It is therefore undoubtedly older than Hezekiah's tunnel. It was made by breaking off bits of the rock with iron or wooden wedges, a method similar to that employed in the Solomon quarries and elsewhere, but there is no finishing of the surface with the pick or chisel. The same method was used in excavating the large reservoir (H-H') at the side of this gallery and close to the cavity. This reservoir (H-H') must have been intended for storing water, and it may have been really part of the system made by the Jebusites and later used by Hezekiah, intended to catch and retain the overflow of the spring when it rushed back from the vertical shaft. It was, in fact, an amplification of the natural cavity of the spring.

*Date (Isa. xxii. 9-11).*—Vincent's idea is that this tunnel is later than the Jebusite Tunnel VI, known as Warren's Shaft and Tunnel, described above. This Tunnel VI, with its awkward vertical shaft and long underground rock passage leading up into the city, had not proved an easy method of drawing water for women. One of the earlier kings, perhaps David or Solomon, had therefore conceived the idea of making a conduit, partly built and partly excavated, to run down the outside face of the rock-spur of Ophel, and carry the water of Gihon to a pool within the city wall at the extreme south end. In this pool the water would be very much easier of

access. Isaiah xxii. 11 is a passage that has always been difficult to explain. Here Isaiah credits Hezekiah with making "a conduit between the two walls *for the water of the old pool*," but accuses him of not having "looked unto the maker thereof or shown respect unto him that fashioned it long ago."

In my opinion, this passage means that Hezekiah repaired this conduit of David or Solomon, which we name Tunnel I. He had found its built sides leaking, probably, and repaired them, thus again bringing the water into the old Pool of Siloam (verse 9), which had evidently been lying dry because of the leaks in the conduit. The accusation either means that he took the whole credit of the conduit to himself, forgetting that it had been made by David, or that, though he repaired David's conduit, he did not follow David's example in his faithfulness to Jehovah. The succeeding verses imply that the latter is the correct interpretation.

If this explanation is correct, it follows that the old pool of Siloam is "the lower pool" here referred to, and that it was the work of David or Solomon. It follows also that the outer wall of Hezekiah must have enclosed this conduit at the lower end of Ophel, and in this case Hezekiah's outer wall must have run down the whole eastern side of the city to the Pool of Siloam.

It is quite certain from the pottery found that this conduit was in use before Hezekiah's time, and as no pottery later than his time was found in it, it seems to have been supplanted ultimately by his Siloam tunnel.

TUNNEL II.—Tunnel II starts on the level of the sixth step from the bottom of the stair that now leads down to the spring, and is thus several feet above the mouth of the spring itself. Its orifice is about  $22\frac{1}{2}$  inches wide. It runs down the valley of the Kidron, following the line of the rock formation of Ophel, towards the Siloam pool, and is thus a very winding channel. For over 30 feet it runs north to south, and then turns south to south-east.

At intervals it broadens to about 5 feet, and at other points narrows to about 20 inches.

This tunnel is cut in the lowest edge of the rock-slope of Ophel just a few feet above the level of the bottom of Kidron Valley, where the king's gardens were situated. This part of the Kidron Valley still contains the finest vegetable gardens

around Jerusalem. The tunnel ran alongside these gardens for its whole length.

At 33 feet out the atmosphere was so bad that candles would not burn, and oxygen had to be pumped in. Even then the squads of men had to be relieved every hour. It was impossible to cut shafts to the surface for ventilation because of trouble with the crops.

At about 15 feet from the orifice Tunnel III is cut westward from Tunnel II, and at this point II was blocked up with city refuse mixed with red clay, hard-packed and covered over with plaster. This city refuse contained potsherds belonging to "the latest Hebrew period," some fragments being "Judæo-Hellenic." Moulded fragments were also found, not usual in a canal. These and the late Hellenistic sherds had fallen through the crevices of the roof.

In the very bottom of the tunnel was a layer of mud 3 to 4 inches deep. This obviously indicates it was a water conduit, and this layer contained only early Hebrew potsherds dating from the tenth to ninth century B.C.

There are various indications that originally part of this conduit was open on the surface. Later, where it ran on the surface, it was roofed over by a ceiling of large blocks hurriedly laid to with a slope, the whole conduit being then buried by deposit of city refuse thrown over the wall. Possibly this roofing was done on the approach of an enemy to prevent his getting a supply of water from the conduit, but more likely to prevent the channel being blocked with rubbish.

At long distances in its eastern wall there were openings of irregular shape at a height of 20 inches from the ground. It is quite clear, therefore, that Tunnel II was a water channel intended to irrigate the king's garden and the adjoining fields. It was an easy matter to dam the channel behind a suitable side opening and force the water to flow down into the field where it was needed. This implies that the channel must have been originally open on the surface, being afterwards buried in city refuse thrown over the wall.

It may be noted also that the height at which the channel leaves the cavity of the spring was intended to prevent this Tunnel II from diminishing the supply of water being carried to the south end of the city by Tunnel I. Tunnel II carried only part of the overflow.

The impossibility of ventilating it prevented Vincent from examining the whole length of Tunnel II.

The channel was cut in the same manner as Tunnel I and the reservoir (H-H') beside it. Vincent therefore thinks that Tunnels I and II and the large reservoir (H-H' on the plan) belong to the same period and system; but the reservoir H-H' is probably Jebusite, as well as the first 15 feet of Tunnel II.

*Date.*—The early Hebrew potsherds found in the bottom layer of mud in Tunnel II prove that these I and II tunnels and reservoir are older than Hezekiah's Siloam tunnel. They must date somewhere between 1200 and 800 B.C. Tunnel I is certainly later than the Jebusite Tunnel VI.

The Hellenistic potsherds and moulded fragments found in Tunnel II are probably due to the throwing of city refuse over the city wall, they having fallen in through crevices in the roof of the channel. Apart from the presence of these sherds, "everything showed the same extraordinary homogeneity" (Vincent).

**TUNNEL III.**—As mentioned above, Tunnel III breaks away westwards from Tunnel II at about 15 feet from the orifice of the latter; and Tunnel II was found blocked at the entrance to III, which was also found blocked.

Tunnel III is a puzzle. Its orifice is about  $8\frac{1}{2}$  feet high, 40 inches wide at the top and 16 inches at the base. About 8 feet from the orifice there is a narrow door (*b*) or opening leading into the continuation of the tunnel. This door is nowhere more than 5 feet in height, and at the broadest is only a little over 3 feet. It was found blocked with a large spherical boulder.

Ten feet further on is a larger door leading into an almost rectangular chamber measuring roughly 10 by  $7\frac{1}{2}$  feet (M). This chamber opens into an oval chamber 14 to 17 feet high, beautifully cut in the rock. The floor of this chamber is almost a perfect oval, its axes being roughly about 16 feet and 12 feet. It has a conical vaulted roof, and seems to have had a small central funnel leading to the surface, as is often found in antique caves in Palestine.

This funnel, however, Vincent did not actually test. The oval chamber contained only a heap of large blocks "taken from some fortification, perhaps from the city wall." Nearly all of these had a well-hewn front with correct angles, but no ornamentation or combing. In the rubbish among these

blocks potsherds of the Hellenistic period were found ; but in the rubbish on the top of these blocks the potsherds were early Hebrew.

What was this large oval chamber ?

Vincent thinks it was originally a cistern, but nowhere in the whole gallery is there any plaster nor any attempt to make the system air- and water-tight. On the other hand, the walls are all most beautifully polished to a fine smooth surface. If this is not the action of water, it must be due to the incessant rubbing of animals' bodies or people's clothing as they passed in and out of the chamber. The fact that there is no layer of mud in the bottom of the tunnel suggests that it was not a water tunnel.

It seems, therefore, that there we have a secret chamber or an ancient cave-dwelling, and Tunnel III was the entrance to it. The funnel suggests it was an ancient cave.

The tunnel itself was packed full of the same soil and potsherds as Tunnel II. The oval chamber had been filled up in late Greek or Roman times by carrying in some old masonry and then pouring in debris from the surface aperture of the funnel. This debris is town rubbish, and shows inverted stratification. As they filled in the debris, the surface material went to the bottom and the older material on the top. Thus we find Hellenistic sherds among the stones in the bottom and early Hebrew above them. That we find only Hellenistic sherds in the debris proves that the filling was done in late Greek or early Roman times (*i.e.*, about 100-50 B.C.).

As to the aperture, I found similar funnels in the large Cave I on Ophel, and also in Cave III beside it. This funnel of Cave III was also filled up with huge boulders of late masonry wonderfully packed in from below.

It seems, therefore, quite clear that the oval chamber of Tunnel III was originally a cave.

The question now arises, How was admission gained to Tunnel III, and was it prior to Tunnel II ? If this was a Neolithic cave-dwelling, we must date III prior to II. If it was a secret chamber for concealment of treasure, it need not have preceded II.

If it is older than II, the original entrance to the oval chamber must have been by the surface funnel, or the first 15 feet of II had been the original entrance to III, and afterwards extended to form an irrigation tunnel, which is very likely correct.



**TUNNEL IV.**—Tunnel IV is really the continuation of III. It runs at right angles to III, north-north-east from the oval chamber, and resembles III exactly in the pickaxe marks, the flat roof and the sloping floor. The floor, however, shows the roughness and deposit which we expect to find under long-stagnant water. Tunnel IV runs right into Tunnel VI, and the mouth where it enters is walled up with irregular slabs and plaster of the same appearance and ingredients as were found in No. I. This walling-up contained brick-dust in the plaster, but was evidently never water-tight. Hence, though we may walk through the Siloam tunnel any day and pass this walled-up entrance without seeing it, the water has all along been trickling into Tunnel IV. This explains the sediment and rough deposit on its floor.

*Date.*—The plaster on these tunnels and walled-up entrances is not a reliable basis for dating. It is evident that it has been renewed at various periods from the pottery ingredients contained in the plaster. In fact, some of the plaster may be quite modern.

But there is a line made by a pointed instrument which runs along the east wall of Tunnel IV and ends in a loop enclosing a tablet. On this tablet, doubtless, had been written an account of the making of these tunnels. It was not carved, however. The inscription had probably been written in brown or black colouring matter, and has accordingly perished.

Vincent thinks that this line proves that the whole series III and IV was made at the same time.

*Measurements.*—The orifice is 68 inches high and *varies from 26 to 36 inches broad*. The tunnel is roughly 32 feet long.

**TUNNEL V.**—About the centre of the west wall of IV, Tunnel V opens out to the west. It runs west-south-west for 22 feet, and then turns to south-east for a few feet. For some reason the work was abandoned at this point. It is unfinished.

It is full of cracks, hollows, lime accretions, stalactites, and the mud deposit rises almost to the roof. This may be due partly to rain-wash from the surface and partly to water running in from IV.

It averages about 50 inches in height, and is about 36 inches in width at the entrance. The average width is 20 to 28 inches. The ceiling is flat, and the floor level rises steadily for no apparent reason. Neither its date nor its purpose can be definitely ascertained.

Opposite to the orifice of V are two small cuttings on the east wall of IV (J and K). These are also the beginnings of two tunnels planned and abandoned.

Tunnel V was probably abandoned because of the porous nature of the rock at that part.

Looking at the whole system II, III, IV, and V, it appears to me quite possible that the first part of II, with III to V, forms a very early attempt to bring the water inside the city. The makers of these had planned running the tunnel straight towards Siloam pool, and Tunnel V may be the result, or V may be later. On account of the bad quality of the rock or the difficulty of levels—for V rises steadily as it advances—they abandoned V and proceeded northwards with Tunnel IV.

Tunnel IV thus may have originally led straight into Cave M at the bottom of Warren's shaft J, and the first part of Tunnel II, with III and IV, had been the water-system dating prior to VI. In fact, they are very probably the work of the Jebusites, their first attempt to bring the water into the city. On finding this system did not work out, they afterwards cut Tunnel VI back to the spring from A, the orifice of IV, which they then built up. In this case Tunnel II, down to the orifice of III, with III and IV, are the oldest; and Tunnel II had afterwards been prolonged to form an irrigation channel. This seems the only satisfactory explanation of the fact that Tunnel VI was cut eastwards towards the spring from A, the orifice of IV; but though the system II to V thus preceded VI, they are probably all the work of the same period.

TUNNEL VII.—Tunnel VII does not proceed far, and there is no explanation of its original purpose, nor why it was abandoned. It was dammed with masonry by Hezekiah.

TUNNEL VIII: HEZEKIAH'S SILOAM TUNNEL (2 *Chron.* xxxii. 30; *Isa.* xxii. 11, *etc.*).—Tunnel VIII is the tunnel made by Hezekiah to bring the water of Gihon down to the south end of the city where he built a new Pool of Siloam to receive it, and thus threw the old Pool of Siloam into disuse.

Hezekiah found the short Tunnel VI in existence and continued it, striking off westwards from it at a point a few feet beyond Tunnel VII. As noted above, he blocked Tunnel VI at R. Possibly he felt that an enemy might find easy entry into the city by Tunnel VI, as some suggest was done by Joab (2 Sam. v. 8; 1 Chron. xi. 6) when David took it; but his one great object was to secure the waters of Gihon for

the inhabitants of Jerusalem, and at the same time make the water inaccessible to an enemy outside the city. Clearly the Jebusite system marked VI did not accomplish this.

Hezekiah raised the level of the floor of Tunnel VI by a layer of solid plaster, especially near F, its exit from the cavity. This layer had been renewed from time to time as need arose. The plaster found in it in 1910 consisted of "greyish, greasy chalk, mixed with calcined fragments and brick dust" (Vincent). It was removed by the expedition of 1910 and found to be extraordinarily hard. The brick dust was finely ground potsherds. When this concrete was removed, the bottom and sides showed very old limestone sediments.

At the same time Hezekiah improved the finish of the walls of Tunnel VI. Up to the mouth of his own Tunnel VIII two distinct methods of work are quite apparent. Up to a height of 18 inches in some parts and about 48 inches in others, where there had been greater accumulation of mud or the floor had been heightened, the work on the walls of Tunnel VI is roughly done with a chisel or with rude hammer strokes, and never finished by the workmen. Above that height the portion of VI reused by Hezekiah shows the regular work of the pickaxe cleverly wielded, and giving a fine finish. Between the dam of IV (A) and the entrance to the spring (F) the pickaxe strokes show that Hezekiah's men worked from west to east—*i.e.*, towards the spring, as we saw also did the makers of Tunnel VI.

It is already well known that, as recorded on the Siloam inscription, Hezekiah's workmen were divided into two gangs—one gang worked from west to east, and the other from east to west, till they met.

The tortuous nature of the cutting is well shown on the plan of Hezekiah's Siloam tunnel published by Père Vincent (*J.S.T.*, Pl. 4).

Beginning at the west or Siloam end, the tunnel runs north-east to east for about 220 feet, and then due east tending to south. At one point it comes so near to the external surface that in a few yards it would have come out of the side of the hill.

Near the centre the waverings due to the meeting of the two gangs and their feeling for each other are distinctly apparent.

Vincent makes Tunnel VIII from its opening off VI about 1,777 feet (533·1 metres) in length.

The fall in the tunnel is not 1 foot, as has been said, but

a little over 7 feet, which is 1 in 254 feet. The breadth of Tunnel VIII at the spring end is 24 to 27 inches. The average height is 6 to 6½ feet, but at the point 167 feet from the spring entrance the height is almost 10½ feet. At the Siloam end the height has been greatly increased by cutting done in Byzantine times. The excavation of the tunnel was done with wedge, hammer, and pick.

The Siloam inscription was found by a lad belonging to the American colony in Jerusalem on the south wall of the tunnel and a few yards in from the Siloam entrance. The part of the rock surface bearing the inscription was cut out by the Turkish Government, and taken to the Museum in Constantinople, where it now lies.

With regard to the plaster or concrete used in the tunnel, Père Vincent says "It is similar to that of the dam by the Virgin's Fountain," which I understand to mean the dam closing up Tunnel I. It contained charming bits of "Judæo-Hellenic or late Hebrew" pottery. It is the same mortar as was used to repair the dams of IV, VII, and VI, where VI enters the cave.

These three points recorded by Vincent leave little doubt that the plaster or concrete which he found in the various cuttings belongs to the Greek or early Roman period, and indicates that these dams had been replastered at that time to prevent leakage. This plaster, therefore, is no indication of the periods at which the tunnels were made or dammed up.

Vincent and his party took down all these dams and rebuilt them, which explains why I found quite modern plaster on the dams which I examined. The present plaster on them therefore dates 1910-11!

#### A WATER TUNNEL AT MIZPAH

At Mizpah in 1929 a vaulted passage or tunnel with a long flight of steps leading down to an underground cave was discovered. In the centre of the cave was found the mouth of a rock-hewn cistern or chamber carefully covered with flat stones. This cistern chamber has not yet been cleared, but the system appears to resemble the great stairway of Gezer leading down to the spring in a cave, and is another example of the great ingenuity displayed in the securing of a water-supply. The stairway had been open and used in Maccabean times, but until the cistern has been cleared, the date cannot be assigned to it. It is, however, most probably of great antiquity.

## EARLY HEBREW WEIGHTS

The earliest weights known so far are dome-shaped. Of these, I found twenty-seven in Ophel excavations; they are all of very hard material, and usually very finely finished. Some of them bear marks the exact meaning of which we cannot tell for certain. An examination shows that the unit was 11 grammes or a fraction of 11. This is what Dr. Macalister found at Gezer. The smallest weights I have found of this type weigh  $3\frac{1}{2}$  grammes exactly. Dr. Macalister, however, found some weighing about 2.7 and others weighing 5.5 grammes, both fractions of 11.

Taking this unit it will be seen that all the weights illustrated are multiples of it with more or less exactness; the weight in grammes is marked on each specimen. In some cases the variation is due to wear and tear; in others to accidental or intentional chipping; in others, the fault apparently lies with the maker, who perhaps never finished his work.

No. 1 has the shape of a flattened dome, rather than a decapitated cone. I have therefore included it among the dome-shaped weights. The fact that it is made of soft white limestone sufficiently explains the error of 2 grammes. This weight is interesting as explaining the development of the form of these weights. The dome-shaped is the earliest we possess. The flattened dome comes next, and this naturally led to the cone-shaped which came next. The cone gave place to the round flat weights, which I have now proved are Hebrew weights of the Maccabean and Roman period.

No. 2, the smaller hæmatite weight, is an exact multiple of the unit (88 grammes). That it bears no mark may be due to the hardness of the material. The other hæmatite weight, No. 3, is perfectly finished in form, but bears no mark, and weighs 181.5 grammes. This is an exact multiple of the unit, being  $16\frac{1}{2}$  by 11. As these weights are of such hard material as to suffer practically nothing from wear and tear, they are strong confirmatory evidence in favour of the unit being 11 grammes or a fraction of 11 grammes.

No. 4 weighs about 454.5 grammes. It is difficult to get the exact weight of one so heavy on very light scales, and equally hard to weigh exactly on scales too large. It is clear, however, that it is of the same weight and unit as two dome-shaped weights found by Dr. Macalister at Gezer. One of

these weighs over 453 and the other over 456 grammes. The weight was intended originally to be 462, 42 by 11 grammes. The error of 7 or 7.5 grammes is large, but the stone is not very hard, and the weight has been much used.

This weight has two well-cut marks, the first presumably representing the unit, and the other the multiple of the unit.

Petrie gives the weights of dome-shaped weights which he found at Gerar in grains—358.6, 359, and 719.4 grains. Taking 15 grains as 1 gramme, we make their weight 24, 24, and 48 grammes respectively. Two of these have the unit mark as on 25, with two strokes to represent the multiple. Presumably, therefore, the two vertical strokes mean two units, and the weight is slightly over weight if 11 grammes is the unit.

In No. 5 the multiple mark is a vertical stroke with a horizontal stroke attached to one side. This mark thus probably means four times the unit.

These three are of brown limestone.

In these dome-shaped weights the very hardest material procurable is used. Hæmatite nuggets were sought in stream beds and ground down to fit the standard nearest to them. Flint nodules were used in the same way (No. 8). Other materials used are limestone, quartz, sandstone, chert, basalt, serpentine (see Gerar, Pl. 68).

DATE.—At Gerar, Petrie's school found altogether 86 hæmatite weights, of which 31 are nuggets and 55 belong to the levels 178 to 189. The two oldest, one a nugget, date about 1450 B.C. The other 53 range from 1300 to 1050 B.C., but nuggets and other forms were found dating as late as 500. None of these bore any mark.

As the nuggets were all, or most of them, dome-shape, we thus find that the dome-shape weight dates from the fifteenth century B.C.

Two are from the 192 level at Gerar, and date about 900. No. 7 dates about 700. They are of limestone, and bear marks. At Ophel the stratification was so mixed that it was impossible to use it in dating. Of the twenty-five from Ophel, the hæmatite nuggets (2 and 3) may date as early as the fourteenth century, and the others date probably from 900 to 700 B.C.

Two of the smallest weights found in Zion are dome-shape. These weigh  $3\frac{1}{2}$  grammes each, and are half-shekel weights of the late Hebrew standard.

## THE MARKS ON THESE WEIGHTS

Thirteen of these weights bear marks intended to indicate their relative weights.

We have in these a complete set of marks for the series of multiples represented with the exception of three units.

Of these marks, one (O or Q) is a Greek omikron with a vav or nun above it, and is common to all. It represents the unit in all probability. It appears inverted as often as not.

Alongside of this mark we find one vertical stroke, two vertical strokes, an angle sign or one vertical with one horizontal, a V mark with one side prolonged and a hook. We have no example of the unit with three strokes.

If, therefore, we take 11 grammes as the unit represented by the mark Q, the other marks will represent the following multiples of 11 :

Q or Q I	1. = 1 unit, or 11 grammes.
Q II	2. = 2 units, or 22 „
Q 7 or L or V	3. = 4 units, or 44 „
Q γ	4. = 8 units, or 88 „
⌒ Q	5. = 42 units, or 462 „

as the weight of those bearing these various marks indicates. The hook mark on twenty-five resembles the hieroglyphic sign for S, and is unique.

As to the meaning of the unit mark, there are various theories. Sayce regarded it as the Cypriote letter  $\chi$  Ro. It looks very like the Greek letters O and V (omikron and vav or nun) above each other; and the same frequently occurs on Arab coins as a united form of the two letters L and A. It is very probable that it is of Hittite or Egyptian origin.

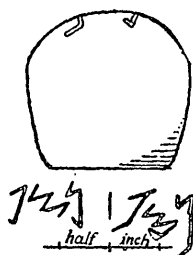


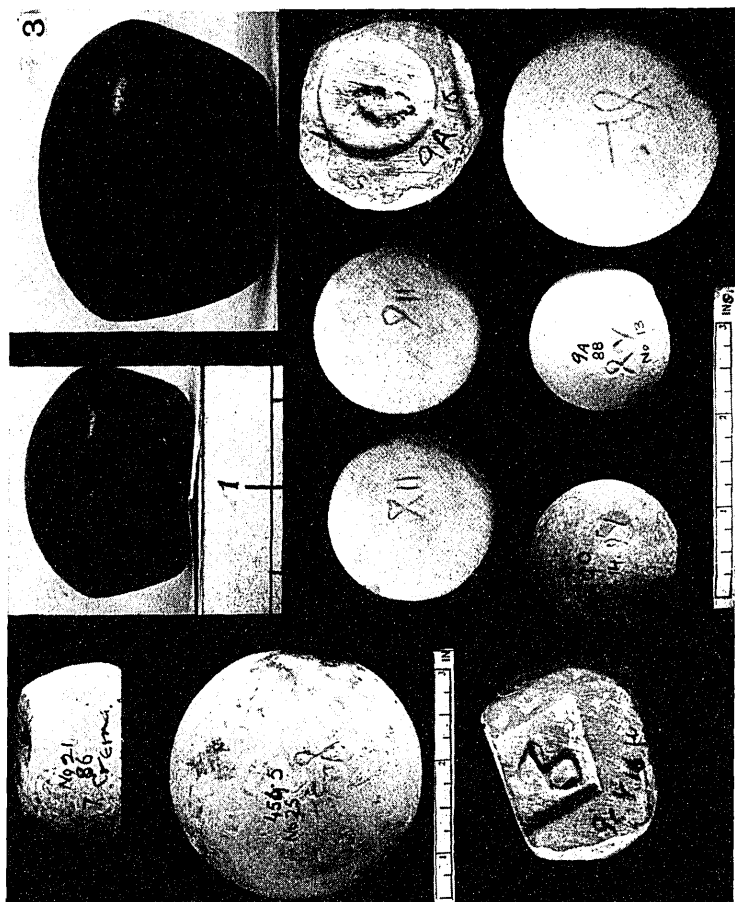
FIG. 29.—INSCRIBED WEIGHT.

At Tell-Zakariyeh, etc., B. and M. found ten dome-shape weights.<sup>1</sup> Three of these from Zakariyeh weighed 10.21, 10, and 9.45 grammes, and each bore the Phœnician letters for נצף (netseph),

“a hitherto unknown Hebrew root.”

At Samaria was found a shuttle-shaped hæmatite weight with רבע נצף (Raba' netseph) in similar characters. This

<sup>1</sup> E.P., pp. 145-6.



DOME-SHAPE WEIGHTS-MARKED.



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⊂ Q	5. = 42 units, or 462 „

as the weight of those bearing these various marks indicates. The hook mark on twenty-five resembles the hieroglyphic sign for S, and is unique.

As to the meaning of the unit mark, there are various theories. Sayce regarded it as the Cypriote letter  $\bar{\chi}$  Ro. It looks very like the Greek letters O and V (omikron and vav or nun) above each other; and the same frequently occurs on Arab coins as a united form of the two letters L and A. It is very probable that it is of Hittite or Egyptian origin.

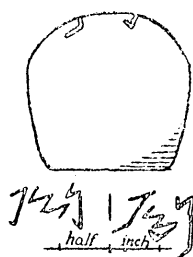


FIG. 29.—INSCRIBED WEIGHT.

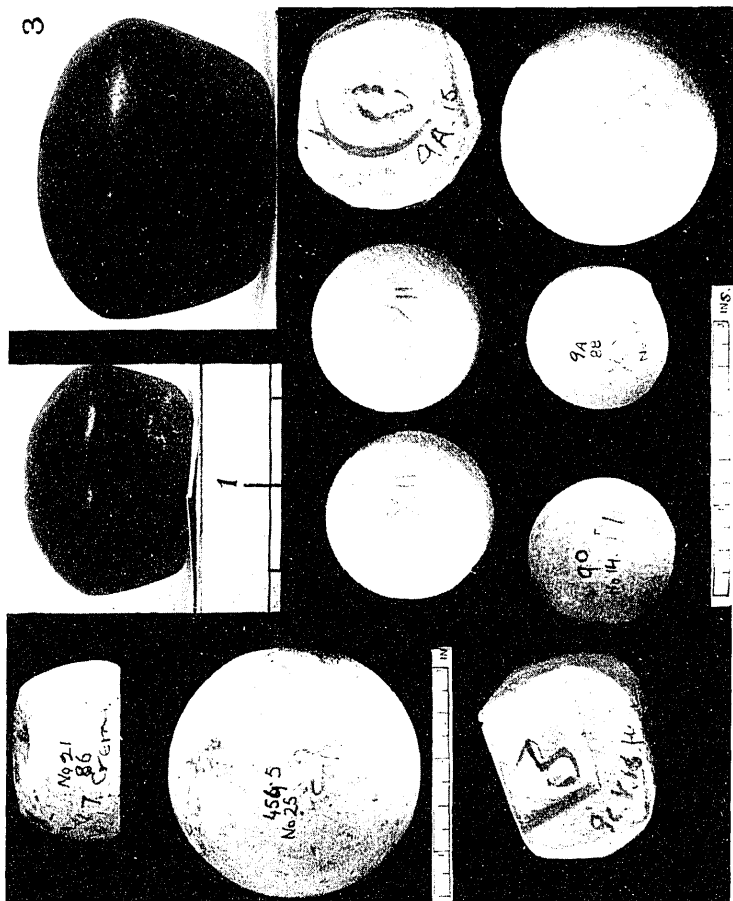
At Tell-Zakariyeh, etc., B. and M. found ten dome-shape weights.<sup>1</sup> Three of these from Zakariyeh weighed 10.21, 10, and 9.45 grammes, and each bore the Phœnician letters for נצף (netseph),

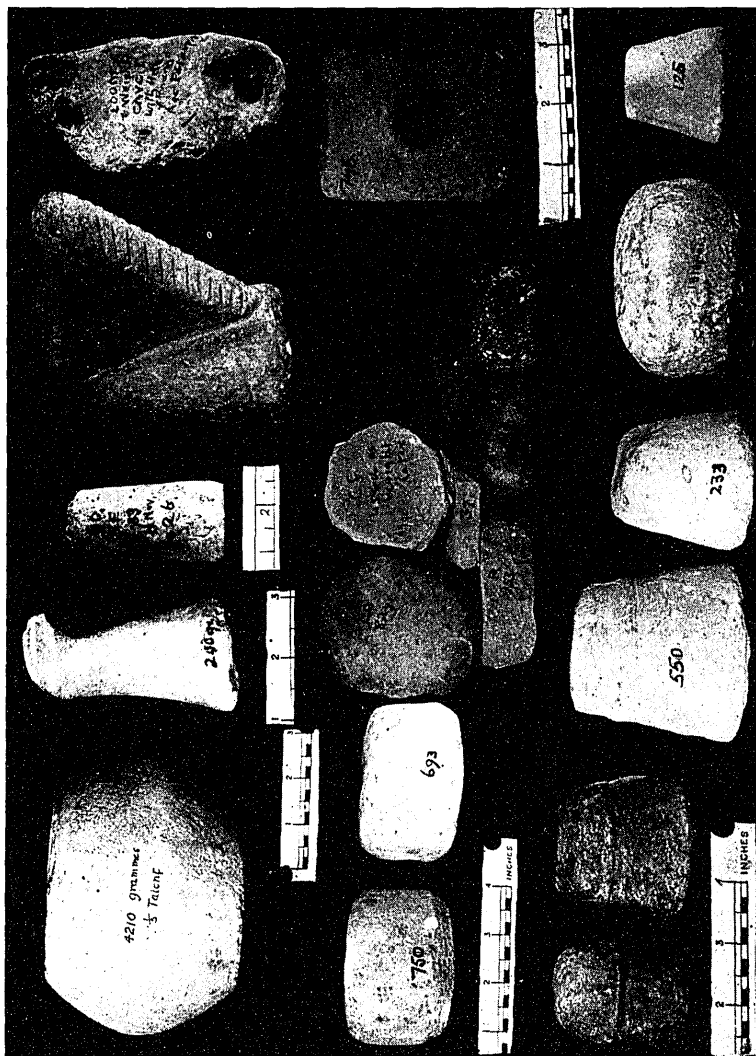
“a hitherto unknown Hebrew root.”

At Samaria was found a shuttle-shaped hæmatite weight with רבנע נצף (Raba' netseph) in similar characters. This

<sup>1</sup> *E.P.*, pp. 145-6.

LOOSE-SHAPE WEIGHTS-MARKED





WEIGHTS—OTHER TYPICAL FORMS.

Kennedy<sup>1</sup> explains as meaning "one-quarter shekel." It weighs about 40 grains, or roughly 2.75 grammes. As the three dome-weights above had all weighed 11 grammes or very near it, and if "netseph" means a shekel, these four weights would make the shekel of their date weigh 11 grammes.

The fact that the three dome-shape weights were found only 5 to 6 feet below the surface level at Zakariyeh suggests that these weights are not of very early date. The one from Samaria cannot be earlier than the ninth century, and may belong to the later occupation after Samaria was destroyed.

All four, however, suggest a unit of 11 grammes. Besides these three B. and M. record other seven dome-shape weights, weighing 90, 88, 62, 47, 45, 15, and 9.75 grammes. Three of these are of "polished black stone," probably hæmatite. All the other seven are of red, white, or grey limestone.

In addition to these, B. and M. found also three weights of different shape bearing the same marks as I found on dome-weights on Ophel. One of these weighs 45.5 grammes, and bears the marks (18) of four units. Another weighing 44.6 grammes has the same marks. The third weighs about 93 grammes and has the mark of the unit quite clear, but the multiple is obscure. There is no doubt the multiple sign had meant 8 units. On these the unit sign is carved as if the letters were omicron and epsilon at that time.

To this class belongs, I think, also the small flat weight of red pottery, originally about  $1\frac{1}{4}$  inches in diameter and  $\frac{5}{16}$  inch thick. It has lost about a fifth of its bulk. In its present condition it weighs about 9 grammes or slightly over it. Originally it must have weighed about 11 grammes. The interesting fact, however, is that it bears a diamond-shaped stamp, and in the centre the two parts of the unit mark found on the other weights placed side by side, instead of above each other. There is no doubt that this is the same unit sign as appears on the dome-weights. There is no stroke along-side of it.

As this weighs practically 11 grammes and bears only the unit sign, we may assume it proves that the unit was 11 grammes, as suggested.

Another pottery weight of practically the same dimensions and of the same material weighs about 12 grammes. It bears

<sup>1</sup> H.B.D., "Weights."



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To this class belongs, I think, also the small flat weight of red pottery, originally about  $1\frac{1}{4}$  inches in diameter and  $\frac{1}{16}$  inch thick. It has lost about a fifth of its bulk. In its present condition it weighs about 9 grammes or slightly over it. Originally it must have weighed about 11 grammes. The interesting fact, however, is that it bears a diamond-shaped stamp, and in the centre the two parts of the unit mark found on the other weights placed side by side, instead of above each other. There is no doubt that this is the same unit sign as appears on the dome-weights. There is no stroke along-side of it.

As this weighs practically 11 grammes and bears only the unit sign, we may assume it proves that the unit was 11 grammes, as suggested.

Another pottery weight of practically the same dimensions and of the same material weighs about 12 grammes. It bears

<sup>1</sup> H.B.D., "Weights."

a circular stamp about  $\frac{5}{8}$  inch in diameter, and in the centre of it what resembles the letter C.

This may be the same stamp as we found on some jar-handles with two lines crossing inside the C, and set down as Hittite.

## STONE WEIGHTS OF OTHER FORMS AND LATER DATE

### THE BABYLONIAN AND HEBREW STANDARDS

Before discussing other forms of weights of later date, it is well to have an idea of these standards of weight, since some assign the Palestinian weights to the Babylonian, and others to the early or late Hebrew standard.

According to the latest statistics, the Babylonian mina weighed approximately 489.6, or roughly 490 grammes. Among the weights found in Zion there were three cylindrical and fifty-two conical weights which would fit into this standard. These fifty-five also reproduce Babylonian forms.

In the early Hebrew standard the shekel weighed 21 grammes (315 grains), while in the latest Hebrew standard the shekel weighed 7 grammes, exactly one-third of it.

The following table is given by Kennedy in *H.B.D.* IV, 906 :

Denarius-drachm is	520 grains or	3 grammes approx.
The shekel is	105	7 " "
Tetradrachm is	210	14 " "
Mina is	5,250	350 " "
Talent is	315,000	21,000 " "

In the matter of weight the examples tabulated fit into this Hebrew standard perhaps better than the Babylonian. An idea of their weight in avoirdupois may be arrived at by allowing 450 grammes to the pound and approximately 28 grammes to the ounce.

Other forms of stone weights are cylinders, cones, double cones, truncated cones, round flat weights, oblong or cubes, barrel-shaped, and shuttle-shaped. (Fig. facing p. 219.)

Of *cylinders* found in Zion, one was of pottery and the other of soft limestone, which weighs 49 grammes (7 shekels).

*Cones* were found of marble, soft and hard limestone, and basalt. Two of the smallest weights found were tiny limestone or white flint cones, one weighing 21 grammes or 3 shekels, and the other weighing 7 grammes, 1 shekel.

One is an octagonal obelisk of basalt weighing 46 grammes, and had originally weighed 49 grammes (7 shekels).

Another is a conical cylinder with rounded ends, 2 inches long. The core where it is broken is white flint, but there appears to be a coating of limestone plaster on the surface, used to alter the weight. It weighs 40 grammes.

A marble cone with a bird's head at the top, had originally weighed 210 grammes (30 shekels), and the white marble cone, with a wing attached as handle, weighs 325 grammes.

*Double cones* are quite a common form. One of hard white limestone, weighed 24 shekels, and the other, of hard red limestone, about 42 shekels. Both are worn or chipped, but had been well finished and turned.

*Truncated cones* are much more numerous. The examples shown are practically perfect specimens. The weight as found is marked on each.

*Round flat discs* are perhaps the commonest form of all. In Zion I found about fifty of these ranging from 15 to 750 grammes in weight, some of them rudely and many beautifully shaped and finished. Some are quite flat, but the finest specimens are oval or rounded, so that only a small portion of the side comes in contact with what it is laid on, which minimises the decrease in weight by rubbing. Some are of soft, but most of very hard stone, especially in the case of small weights. Of weights from 15 up to 200 grammes only 17 are of soft limestone, while 44 are of hard, 13 of other harder stone, and 8 of pottery.

One, weighing 728 grammes (or 104 shekels), has cross-lines on each flat side with a Greek letter in each triangle. On one side the Greek letters are ΙωΣΗ, on the other ΑΛωΗ or Σ (badly rubbed).

Four had a tree design on one flat side. One weighs about 56 shekels (395 grammes), and is hard limestone.

Another weighing 750 grammes, is a finely finished weight with a basket pattern painted over it and bevelled edges. Two holes had been drilled on one side to about  $\frac{1}{4}$  inch depth. One had lead filling in it to bring it up to the standard. It weighs over  $1\frac{2}{3}$  lbs. avoirdupois. This weight was found in the *Byzantine level*.

That weighing 693 grammes or 99 shekels is of white flintstone. On both sides are hollows from which lead filling



has dropped out, and there are cross-lines on each side, but no letters.

One is a very large weight (1,810 grammes, or about 260 shekels). It is 3 inches high and 5 inches in diameter, and is of white flintstone, but has lost 1 inch diameter at one point. It probably weighed 2,100 grammes, and is one-tenth of a talent of the latest Hebrew standard or  $4\frac{2}{3}$  lbs. avoirdupois.

The first four are Byzantine weights, and date between 350 and 600 A.D. The last is very much earlier.

The flat marble weights (not shown here) are also of the late Roman or Byzantine period.

Lighter weights of this class were frequently roughly cut from slabs of broken pottery.

The finely finished barrel-shaped weight stands  $4\frac{1}{2}$  inches high. Its upper and lower diameters are  $4\frac{1}{2}$  inches, and the middle diameter is  $6\frac{1}{2}$  inches. It weighs 4,210 grammes.

On one base the Greek letters IE are inscribed side by side, on the other the same letters are repeated by a much less skilful hand. These are two of the letters which occur on the one above described, though whether epsilon or omega is there intended it is difficult to say. Here it appears to be epsilon, and the two letters might stand for fifteen in numerals.

Another large stone weight of about 8,400 grammes is made of hard limestone, and has a neat handle carved in it. It is  $10\frac{1}{4}$  inches of average length, 7 inches broad, and 5 inches deep, and really belongs to the oblong class. It is unique in shape, and the handle is so unusual and so modern in appearance as to make us suspect it. Its weight, however, is interesting. It is exactly double the weight of the last, as it stands at present. There is every appearance also of this stone having been reduced one-fifth of its weight by chipping all round, and perhaps also by the carving of the handle which, on a rough estimate, would reduce it by that amount. There is no mark to indicate its weight. If, therefore, we assume that this weight originally weighed one-fifth more, its weight would then be 10,080 grammes, or practically half a talent of the Hebrew late standard. Further, the weight marked 1,810 grammes bears every appearance of having lost much of its weight. If it has lost 190 grammes (about  $6\frac{1}{2}$  ozs.), then originally it must have weighed 2,100 grammes, one-tenth of a Hebrew talent, or six Hebrew minæ.

Thus these four weights, 1,140, 1,810, 4,210, and 8,410, suggest that the late Hebrew standard was employed at the period when they were in use and that they belonged to it.

*Shuttle-shaped weights* were found in the Shephelah Tells weighing 26 and 6.37 grammes, and one of hæmatite from Samaria is described on p. 218 (*H.B.D.* IV, 904). In these Tells also examples were found of most of the types here described (see *E.P.*, p. 146).

Of *oblong weights or cubes* there are nine examples from Zion, two of them particularly fine specimens.

The finest is of porphyry (745 grammes, about  $1\frac{2}{3}$  lbs. avoirdupois), measures  $3\frac{1}{4}$  by 2 inches, has the usual hollow on one side roughly cut, and has every edge bevelled to a breadth of about  $\frac{1}{4}$  inch. There is no mark or indication of weight.

Another good weight is of basalt, 2 by  $1\frac{1}{2}$  inches, with the ends rounded or worn as if it had been originally used as a stone hammer. It may be a very much older hammer used as a weight by the Romans or Byzantines. It weighs 215 grammes, roughly 30 shekels, and is hollowed in the four sides, as if for finger grips.

One weighing 442 grammes is a cube of very hard limestone,  $2\frac{3}{8}$  inches square, and is unique in having quite a deep hollow cut on every one of its six sides.

Of others, three are of hard limestone, weighing 290, 370, and 960 grammes as found. One of slate, which had been originally a sharpening stone, weighed 58, and was hollowed on every side.

*Barrel-shaped weights* are of rarer occurrence. Two were found in Zion weighing 1,140 and 4,210 grammes. The first is roughly  $\frac{1}{10}$  talent and the other  $\frac{1}{5}$  talent, or 600 shekels. As it has lost over one-fifth of its bulk, however, it was originally a  $\frac{1}{4}$ -talent weight.

*Loom-weights* are found in practically every site excavated. Originally the threads were bunched together and heavy weights attached. In this way, very few would be needed for the breadth of the cloth. A heavy weight of this type had originally been a door-socket or something of that sort. The method of attachment is clearly shown by the grooves on the soft limestone. Later it appears that small weights were used attached to single threads or groups of two or three, and abundant specimens of these smaller weights in stone and

pottery have been found. That shown on the figure gives an idea of the clumsy material used.

*Bronze weights* of the Arab period were also found in the upper stratum of Zion. One of these has the Arab letters SH printed on it, probably abbreviated for saheh, meaning "genuine" or "correct." This implies some form of State supervision at that period (A.D. 600 downwards).

It is doubtful whether Roman balista balls and slingstones were used as weights, though it is very likely that they were.<sup>1</sup>

From examination of these weights we may note that any kind of material to hand was used for making weights—pottery, marble, paving slabs, limestone, porphyry, and even potsherds.

Such things as damaged balista balls and pestles or rubbers lent themselves readily to this use, and were appropriated at once.

If a weight became worn or broken, merchants took the readiest way of bringing it back to standard by chipping it down to a lower weight, and doubtless, often when they needed a smaller, they supplied the need by roughly chipping down a larger one. This is true especially of the conical weights.

In one instance of an early date lime plaster was used to increase a weight.

In two or three cases we find lead filling used. These are late.

We have also found pieces of lead rounded on one side and flat on the other, which had been poured into a hollow of a weight and had dropped out.

The occurrence of hollows in practically all the round flat weights, exactly the shape of the pieces of lead found, indicates that these were altered by lead filling. It was also in specimens of this class that we found lead filling in position.

### DATES

With regard to the date of these weights, the following facts may be noted :

They are all, or mostly, found thrown away in cisterns used by Arabs or Byzantines as ashpits, especially the conical weights, which shows that these weights were obsolete at that date.

In the two-mouth cistern in Field 5, B, for instance, many

<sup>1</sup> See *Accuracy of the O.T.*, p 33.

conical weights were found with Roman pottery. We know that this cistern was used in Byzantine times by the occupants of the large Byzantine house. We infer, therefore, that the cylindrical and conical weights were in use in Roman times and previous to that.

Many of the round flat weights were found in Roman and Herodian levels. Those which show lead filling were found in the Byzantine level. It is quite likely, therefore, that the conical weights, which were never altered by addition, but by subtraction, antedate the round flat weights, which we find with lead filling, and all of which were supplied with hollows to hold it.

The conical weights, therefore, are probably Hebrew of the Maccabean period or earlier, and represent earlier Hebrew or Babylonian types.

It is likely also that lead filling was introduced in Roman times, and by these thoroughly up-to-date people.

The round flat weights, therefore, date from about the Roman period downwards.

Pottery and marble weights supply a limit *a quo* of themselves. If we find Herodian or Roman marble floor tiles used, we know that the weights must date after that period. If they are made of Roman potsherds, they cannot date before the Roman occupation, and may date much later.

That pottery weights were used at an early date, however, is proved by our finding them in such places as the lime floor-beds of Byzantine mosaics, and several are made of early Bronze Age Canaanite pottery. These were actually found almost at the Canaanite level, and were probably used in Roman times, for the Romans invariably got down to Canaanite level before they began to build.

The only weight found with a handle is indisputably Roman, having its sides covered with longitudinal planes and ridges alternately, as we find on their small stone two-handled pots.

The Roman balista balls speak for themselves. If used as weights, they date subsequently to the siege of Jerusalem in A.D. 70, and were used by settlers on Ophel after that period.

The round flat weights with a tree or branch incised are manifestly late Byzantine. One of 185 grammes has a seven-point tree which may be a reminiscence of the seven-branch candlestick lamps. Other three smaller weights have a five-point tree on them, which may indicate an even later date

when the original significance of the decoration was lost sight of.

Many of the conical weights are beautifully turned, indicating the use of a lathe in Herodian and Roman times.

It is indisputable, therefore, that these conical weights were used in Roman or Herodian times and perhaps earlier. Some of them, therefore, belong to the time of Christ, and others date much later.

#### MATERIAL USED FOR WEIGHTS

In the excavation of ancient Zion I found hundreds of weights, most of them in cisterns which had been used as rubbish pits. These varied from crude, roughly shaped lumps to carefully finished, polished and even turned forms, and in material from the softest limestone to basalt and flint. Of 174 selected, 102 were hard limestone, 26 soft limestone, 16 of marble, 10 of flint, 6 of basalt, 1 of porphyry, 2 each of *white flint, slate, and lead*, and 9 of pottery. Fifty-six of these weighed from 4 ounces down to  $\frac{1}{4}$ , and even  $\frac{1}{8}$  ounce. These tiny weights of  $3\frac{1}{2}$  grammes were  $\frac{1}{2}$ -shekels, and the predominance of small weights suggests they were used by goldsmiths, and probably druggists. Fifty weighed between 4 and 8 ounces, 47 between 8 ounces and 1 pound, 17 between 1 and 2 pounds, and the other 4 weighed roughly  $2\frac{1}{2}$ , 4, 10, and 19 pounds respectively. The talent of the late Hebrew standard (21,000 grammes) weighed  $46\frac{2}{3}$  pounds, taking 450 grammes to represent 1 pound.

Though the vast majority of these weights were of very hard material, all bore evidence that their weight had been altered. As they got worn or broken, merchants did not, until a late date, restore them to their original standard by the use of material such as lead or plaster, but reduced them to the next standard below by boring a hole in the base. Perhaps, also, they replaced lost weights by chipping or halving heavier ones. The fact that they were altered at all indicates that there was a recognised standard in some form, and this is confirmed by the frequent references to "false" weights in the Old Testament; but it does not necessarily imply that there was State supervision. Weights were brought to recognised standards, established by use and wont, in response to the demands of public opinion. In the native bazaars of Jerusalem today there is great variety in weights, and merchants are preferred whose *rotl* or *kilo* is heavier than that of others.

There is no supervision, and each seems to fix the standard for himself. If his weights are glaringly false, trade passes his door. It was interesting to find that a rotl of grapes bought at our door from a peasant hawker weighed exactly double the rotl of the bazaar.

A curious feature, also, is the use of any ordinary clumsy lump of limestone as a weight. I have seen merchants in the bazaars of Jerusalem using these shapeless lumps, smoothed and yellowed by age and wear, as weights from a kilo down to half a rotl, and travelling hawkers or peasants from the country use nothing else.

In the Canaanite and early Hebrew periods they shaped their weights carefully as a rule, though they used roughly shaped lumps as well; but it was striking to note that these shapeless lumps used in the bazaar showed no trace of chipping or of corners accidentally knocked off.

This inclines us to think that most of the alterations noted above were intentional, and that "false" weights abounded in the Hebrew period. Micah vi. 10-11 speaks of "scant measure, wicked balances, and deceitful weights," three distinct methods of cheating. Deuteronomy xxv. 13, 15 speaks of "divers weights," just as we might say of the native bazaars today. Proverbs xi. 1 condemns the false balance and commends the just weight. All three point to a state of matters much the same as exists at the present day.

I took fifty of these weights to a Jewish shop in Jerusalem to have them weighed, and the merchant immediately declared that they could not have been used as weights, as some of them, being soft limestone, were bound to become false by wear in a very short time. I pointed out that the risk was all in favour of the merchant, and that his objection showed that the standard of business morality at the present day is evidently higher than it was some 2,500 years ago. He did not relish the idea, but his attitude may not represent the universal code of even the present day.

OTHER OBJECTS IN STONE.—In the later and Roman periods stone was freely used in making vessels and other accessories of daily use. The three-footed, broad, shallow basin<sup>1</sup> of basalt is of common occurrence, though seldom found complete, and frequently the feet of similar vessels made of pottery and of earlier date occur. The one in basalt seems to

<sup>1</sup> Plate facing p. 228.

have been a portable olive-press for use in the home. A large bowl with a finely smoothed hollow and an unfinished exterior was probably used for roughly grinding oats with a heavy pestle. What purpose the deep, well-finished bowl of hard limestone served is uncertain, but it is generally described as a laver of purification, of which there were seven in every synagogue, though six is the number mentioned at Cana in John ii. 6. The six water-pots of stone of that passage are generally understood to have been vessels of this description.

Goldsmith's moulds for making ear-rings, necklaces, etc., of slate and limestone, door-sockets, troughs, and portable incense altars are features of most excavations, and stoppers of soft limestone for water-bottles occur in all periods and many varieties.

### HEBREW LAMPS FROM OPHEL, ANCIENT ZION

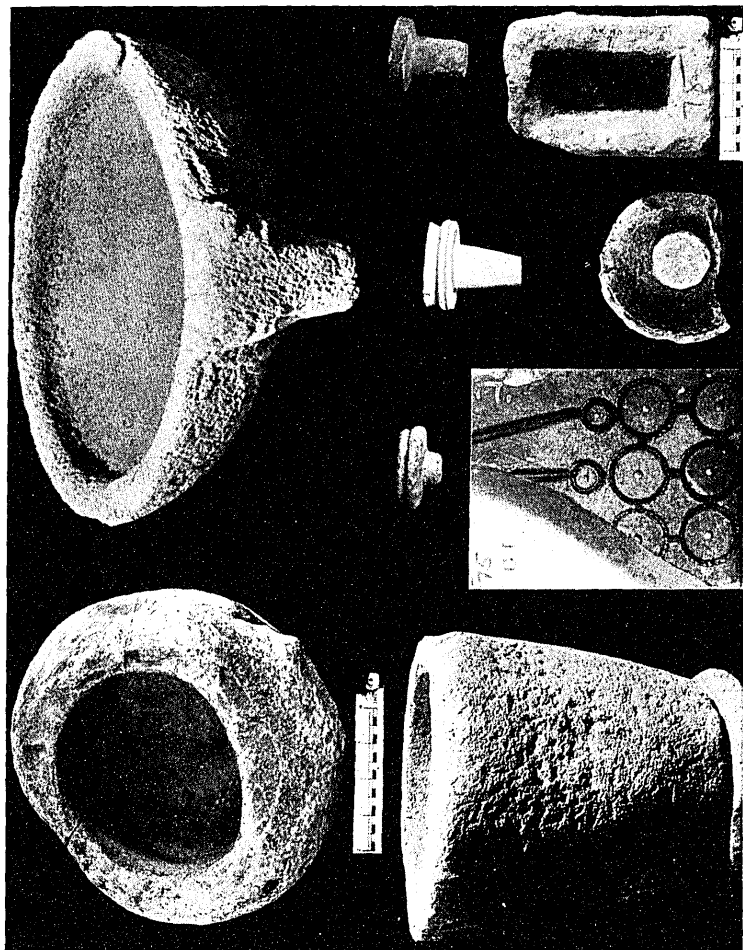
The spouted saucer lamp appears first among the Canaanites prior to 2000 B.C. It was adopted by the Hebrews. The Canaanite lamp has a very small spout made by a gentle pressure of finger and thumb on the soft clay. The base is rounded and has no ring. This type was found in the Hyksos burials at Bethpelet dating 2375 B.C., and Petrie concludes it was Hyksos in origin.

In the Hebrew lamp the spout is lengthened to about three finger-breadths, and the base of the oldest examples is a flat disc (Fig. facing p. 229). These date from about 1200 to 800 B.C. In Group 2 the lamp is very much the same shape, but the disc base is deepened to give the lamp weight and prevent its capsizing.

These date from 900 to 600 B.C.

The tendency in changing the form of the lamp was first to lengthen the wick-spout and gradually close it. This is seen in Group 3, which are really small saucers pinched together by the potter's fingers almost at the centre, the result being that the bowl is reduced in size, the spout lengthened in proportion and almost closed. They are pre-Exilic, and date from about 700 B.C.

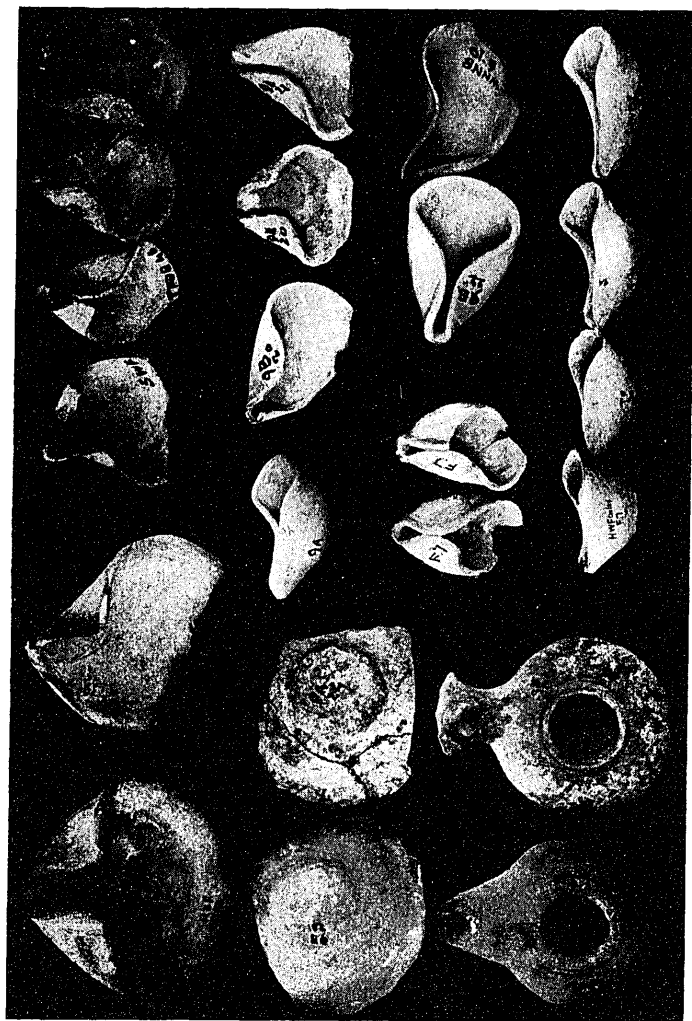
Groups 4 and 5 are both of this type, and I set them down as belonging to the Exilic period, 600 to 450 B.C., though the form may have come in even earlier. In Group 4 the spout is folded close.



# OTHER STONE OBJECTS.

LAVER; GOLDSMITH'S MOULD; STOPPERS;





HEBREW LAMPS.

In Group 5 the spout is closed altogether and the mouth of the oil-cup made circular. The spout is clumsy and suggests that it is a development of the form in Groups 4 and 5.

Group 5 are assigned to the early Greek or Persian period, about 600 to 440 B.C.

In later forms the oil-well is of the same type as last; but the clumsiness of the spout is reduced and the wick-hole made much neater. These belong to the earlier Hellenistic period, 300 to 150 B.C.

Knobs are added at the sides like dummy handles, and ring-handles begin to appear at the end of the bowl.

The splayed spout is Maccabean (150-50), the other belongs to the Roman period. In the Roman period highly ornate ring-handles with a flat disc above the ring for the thumb to rest on become common. The bowl was filled with oil, and the wick lay along the spout. What they used for wick has not yet been discovered. These groups show the main types from 1200 to 1 B.C. Decorated lamps begin to appear in the Greek period.

A fuller description of lamps may be found in *Gezer* I and II and elsewhere. The examples shown here are all from ancient Zion.

## GOLD AND SILVER OBJECTS

### GOLD

Though gold and silver were used in Babylonia in the making of elaborately designed jewelry as early as 3500,<sup>1</sup> and the Hittites must have brought gold into Palestine at least as early as 2000 B.C., while the Hyksos must have brought it with them at 2400 B.C., yet I doubt if we possess a specimen of gold work from Palestine which can be authentically assigned to the Early Bronze Age.

Beads of gold and silver, as well as of a great variety of precious stones, were found in the Naqada graves, and not only are the forms of these totally distinct from Egyptian, but many of the stones were never used by the Egyptians.

There is little doubt that the Amorites themselves worked both gold and silver in their earliest civilisation, and we can only attribute our possessing no authentic examples of the Early Bronze Age either to the fact that we have never yet examined

<sup>1</sup> Woolley, *The Story of Ur*.

an Amorite cemetery or undisturbed Amorite site, or we may set it down to the depredations of the spoilers.

The earliest specimens which we possess belong to the Middle Bronze Age (2000 to 1600). At Gezer<sup>1</sup> Macalister found that in this period, which is characterised by the arrival of the Hyksos or Hittite or both civilisations, the Canaanites were skilled in the working of gold. They knew how to beat it into leaf and ornament it in repoussé. They cast and hammered it into any shape required, and they drew it into wire and used it for ornamental purposes in this form. He found examples of all these forms. The earliest specimen is

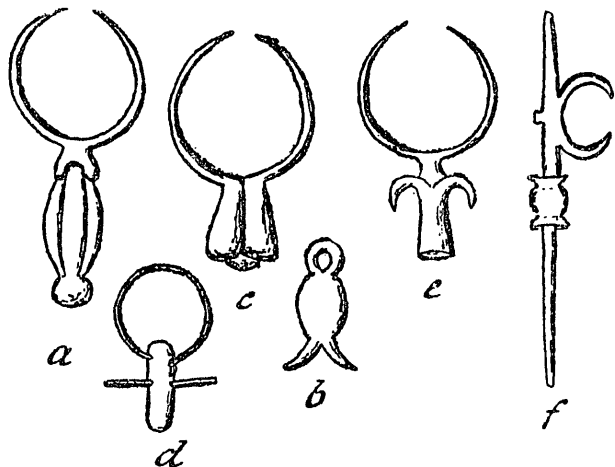


FIG. 30.—STONE MOULD FOR CASTING ORNAMENTS.

an armlet<sup>2</sup> of beaten leaf of gold found in Cave 28, II, with a "hook and eye" fastening of gold wire. This cannot date earlier than 2000.

At Gezer the gold reached the goldsmith in the form of ingots,<sup>3</sup> two specimens of which were found in the debris. A stone mould was also found dating about 1200 to 1000 B.C., from which six different forms of ear-rings, etc., were cast, but, curiously, none of the examples found in Gezer correspond with any of the forms of this mould, and only one half of the mould was found. This mould measured roughly 3 by 2 inches and  $\frac{1}{2}$  inch thick. Other stone moulds of the Maccabean period are shown above under Stone Objects.

<sup>1</sup> G. II, 260-261.

<sup>2</sup> See G., Plate 31, 1.

<sup>3</sup> G. II, 259.

## SILVER

As the silver-spouted jug from Byblos proves, silver was undoubtedly worked as early as gold, yet our information is even more scanty and specimens of the early periods still fewer. Gezer was even more fruitless in silver than in gold, and the examples shown seem to be of late date. These include ear-rings, bracelets of silver wire, crescent pendants, pins, amulets, and toggle-pins with the hole half-way down the stem, which M. describes as hairpins. The two silver vases, which were regarded as Philistine,<sup>1</sup> are the same work and of the same period (eighth century) as that shown from Bethpelet. Toggle-pins are Hyksos, and date from prior to 2000 B.C.

Curiously, though the ancient Zion must have teemed with vessels and ornaments of gold and silver, not a scrap was found on the site. The finest examples which we possess have been found at Gerar, Bethpelet, and Byblos, and these we describe below. They date from the sixteenth century downwards.

## JEWELRY, ETC.

## GOLD

A frontlet of gold (No. 1), 11 inches long,  $1\frac{1}{2}$  inches broad, and  $\frac{1}{500}$  inch thick, was found at Gerar. The surface is divided into thirteen polygons by plain bands crossing it. Each polygon is covered with very tiny punched circles and intersected by diagonal lines of minute prick points. It weighs 144 grains, but has lost several, so that it probably weighed 150 originally, or 10 grammes (less than 1 oz. avoirdupois).

This had evidently been a frontlet set with a plaster backing on the forehead of a statue. The form is unusual, if not unique. It had been torn off, rolled up and hidden away with other jewelry in the 185 level, so that it dates about 1200 B.C. (see Frontispiece).

A gold disc or brooch from Gerar measures over 3 inches wide and weighs 24 grains. It is pierced with the outlines of four lotus buds, which would show up against a background, and is also covered with prick-point decoration (No. 2).

Eleven solid gold ear-rings, forming part of a jeweller's stock, were found at Gerar dating 1200 B.C. These weigh

<sup>1</sup> See Fig. 31.

from 82 to 31 grains, or roughly from less than  $\frac{1}{2}$  ounce to  $\frac{1}{8}$  ounce. Five of these are shown on Frontispiece.

With them was found a bead of deep blue glass with zigzag lines of white. Another ear-ring of solid gold found in the 1500 B.C. level is the only gold ear-ring from Gerar apart from those found in the 1200 B.C. level (No. 5). In the ruins of Bethpelet no fewer than twenty-six gold ear-rings were found, all of them belonging to the fourteenth to thirteenth century B.C. Of these ten are ear-rings with cylindrical pendants attached which show fluted or prick-point decoration (No. 6).

The cylinder with the two rings of attachment on the top was found among some Syrian jewelry at Rheyta in our excavations in Goshen of 1905, and closely resembles these pendants. The other sixteen are solid gold, and of similar design to the above.

Lunate or crescent-shaped ear-rings of gold-leaf filled with stucco are common in Egypt. No. 7 shows two from Goshen of the fifteenth century B.C. These occur also in Palestine, and especially in the period of Solomon.

### SILVER

Two silver ear-rings from a group of five found at Gerar date at 1200 B.C. The other three date 900 to 600 B.C. They are of much the same design as the gold ear-rings above.

A solid silver bowl (*cf.* Fig. 31) is one of two found in the Greek stratum at Bethpelet which belong to the eighth century B.C. They show Babylonian-Grecian work. The fine dipper in solid silver, with the handle representing a girl in a swimming posture, is also from Bethpelet and belongs to the same period. These bowls are the same work as the silver objects found at Gezer and described as Philistine. The tombs in which these were found are really Greek burials of the eighth century B.C. Of the silver objects found in these tombs at Gezer, one is a carinated bowl (Fig. 31) with bosses round the bulge. The lines between are incised. Another bowl is  $4\frac{3}{8}$  inches in diameter, has the lotus pattern, and bears a rosette on the base. On the base inside are four concentric circles. A third vessel is a plain silver saucer; and the fourth, a silver vase with gadrooned design. The

silver dipper ( $8\frac{1}{4}$  inches long) has a rectangular stem, and the ring handle ends in two lion-heads. A silver anklet and a bronze-gilt bracelet were also found with these. Other similar objects from these burials are in bronze, a carinate bronze bowl, two bronze mirrors, and a bronze dipper.

The fine silver jug with hinged lid, resembling a modern teapot, comes from Byblos (north of Beyrout), the Gubla of the Tell-el-Amarna Letters, and belongs to the XII Dynasty period, about 2500 B.C. A silver bowl, decorated in spirals with bossed centres as found also on the Mycenaean jug shown

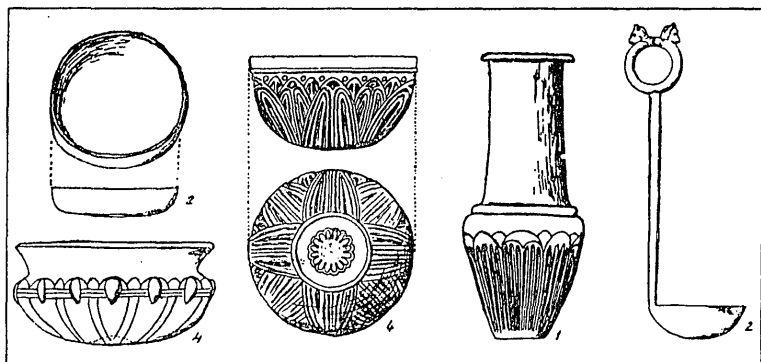


FIG. 31.—SILVER BOWLS, VASE AND DIPPER (GEZER).

in *Revue Syria*, 1922, p. 299, was found with it; and in the same sarcophagus with both was found also the beautiful cup or vase, with lid, of obsidian set in gold. It is 5 inches in height. Two hieroglyphs are incised on the gold mount of the neck and three others on the gold mount of the lid. The two on the neck indicate the amount of the unguent contained (see Fig. facing p. 234).

## BEADS

A description of the beads of Palestine would fill a small volume of itself. So great is the variety of form and material that it is practically impossible to classify them. At Gezer they were found in profusion in every stratum. On Ophel, so often has the site been reoccupied, that very few examples were found.

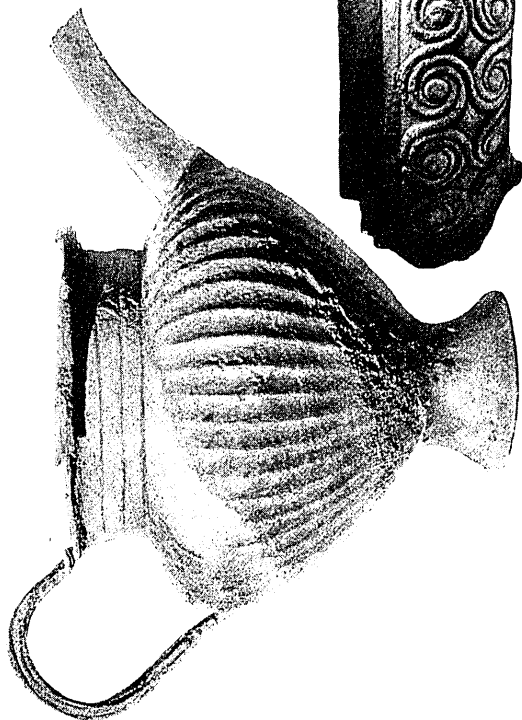
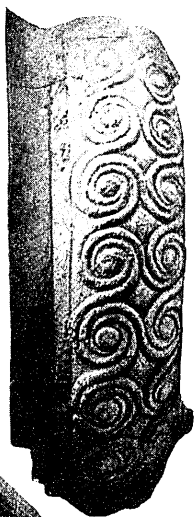
From the earliest period, I and II Bronze Ages, gold, silver, and stone were used, but few specimens remain. Macalister states that enamelled porcelain beads, "doubtless imported from Egypt," were found at Gezer in the Early Bronze as well as in the II Bronze stratum. This is interesting, since it implies contact with Egypt as early as 2400 B.C., and has a direct bearing on the problem of the Hyksos, who are now known to have been in Palestine by 2375 B.C.

Beads are found of every size "from a pin's head to a pigeon's egg." In form they are round, spheroidal, square, cylindrical, bevel-shaped, single, double, multiple, and many other shapes. In colour they are black, white, red, blue, green, purple, and every possible colour and even combinations of colour. In material they are of bronze, gold, silver, stone, bone, ivory, porcelain, glass, cyanus, pottery, resin, shells, amber, and other materials. Glass beads appear to have come in from Egypt about the fifteenth century, and were common from 1400 to 1000 B.C. at Gezer. Gerar and Bethpelet confirm this. On these two sites beads were found in great quantities. In *Gerar*, Plate XXII, the beads are arranged so that the history and duration of the various types can be seen at a glance. The beads of Bethpelet are classified and shown in the *Corpus of Palestinian Pottery* just issued.

Of beads in stone, the various materials are carnelian, agate, jasper, sard, amethyst, crystal, limestone, basalt, hæmatite, quartzite, slate, jade, onyx, and others. The forms appear to be borrowed from Egyptian.

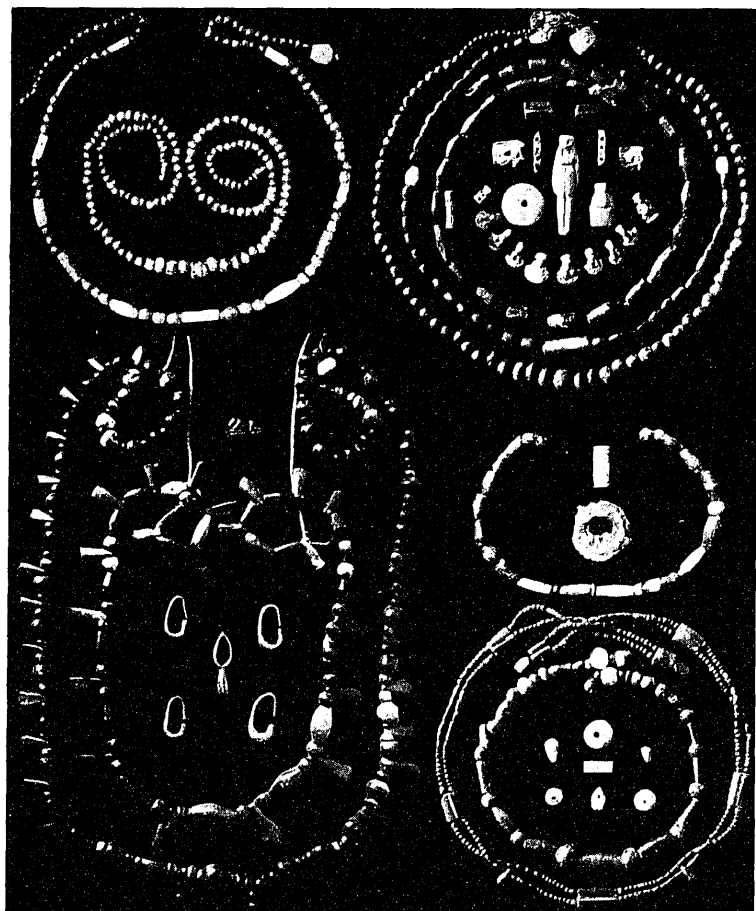
Though stone beads were made in the earliest Amorite period, the lapidary seems to have reached the highest stage of perfection in the late Bronze Age (1600 to 1200) and after that period. In the beads of the foreign race at Naqada, who were either Amorites or a people closely akin to the Amorites, the materials used are gold, silver, hæmatite, carnelian (translucent and opaque), agate, quartz crystal, amethyst, garnet, slate, red-brown steatite, green serpentine (transparent), turquoise, white calcite, lazuli, clay, blue glazed stone, green glazed stone, blue-green glazed pottery, shell and amber. Of these, glazed quartz crystal, slate, clay, red-brown steatite, and green serpentine were seldom, if ever, used by the Egyptians. No such variety has yet been found in Palestine of the early Amorite period.

Of the period of the Hebrew conquest (1200 to 1050), some



SILVER VESSELS, AND OBSIDIAN VASE FROM BYBLOS.





STONE BEADS—PERIODS OF CONQUEST AND SOLOMON.

TOP LEFT—NO. 22 OF TEXT.  
BENEATH—NO. 21 OF TEXT.

TOP RIGHT—NO. 23 OF TEXT.  
MIDDLE RIGHT—NO. 24 OF TEXT.  
LOWER RIGHT—NO. 20 OF TEXT.

facing p. 235.

very fine examples have been found at Gerar in brown agate, onyx, red carnelian, brown carnelian, and sard (Fig. opposite, No. 19). These are long, oval, or barrel-shaped beads, and were found with the gold ear-rings Nos. 3, 4, and 5. They date about 1200 B.C. Of the two strings shown on No. 20, the outer consists of barrel-shaped beads of bone with small round carnelian beads grouped between them. The inner consists of small round carnelian beads graded in size. These date about 1140 B.C.

So far, no beads in gold and silver that can be assigned to this period have yet been found; but it cannot be inferred from this that jewelry in these metals was not worn in this period. Bracelets, rings, and other ornaments in copper, bronze, and even iron were quite common.

Of the early Hebrew period, the reign of Solomon is unquestionably the richest in jewelry, just as in other respects it represents the acme of Hebrew power and prosperity. Here again there is a great affinity with the Egyptian forms, as in the previous periods. Both Gerar and Bethpelet have yielded many fine examples of stone beads, though beads and jewelry in gold and silver are by no means abundant. From Bethpelet comes the very fine necklace of agate dating 1000 B.C. (No. 21). The ear-rings in the centre are of solid gold. No. 22 is from Gerar.

The inner string is of barrel-shaped and cylindrical beads of sard, with carnelian balls and quartz ends. The outer consists of double-tube carnelian beads, with small ring beads and pointed pendants. These date 1000 to 930 B.C. (*Gr.* XXI, 2).

From Gerar also comes the collection shown on No. 23. The innermost string is of barrel-beads in sard. The middle string is brown quartz with rock crystal beads, larger and smaller, mixed. This brown quartz is translucent and cloudy (*cf.* cairngorm stones). The outside string is balls of carnelian.

The centre figure is Hathor in ivory. Beneath it is a necklace of "blue-glaze ægides of Bastet" of the regular XXII Dynasty type in Egypt, 930 B.C. (*Gr.* XXI, 3).

These are selected as representative of the period of David and Solomon, but give no idea of the quantities found. For fuller information the works on Gezer, Gerar, Bethpelet, and other sites should be consulted.

## BRONZE OBJECTS

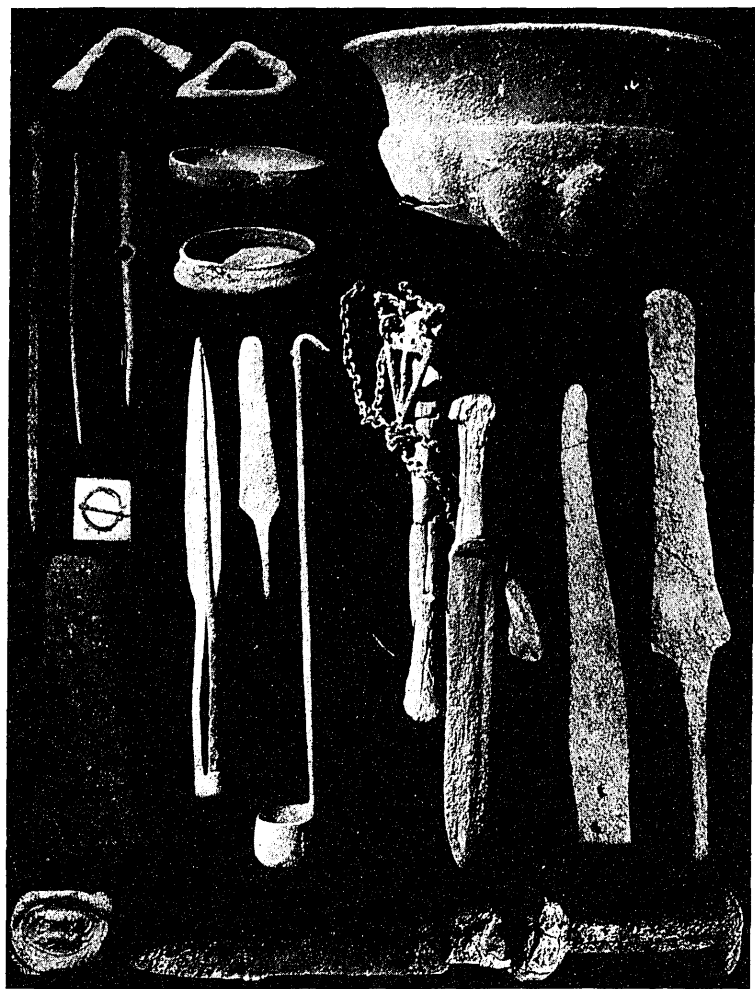
At Gezer bronze was found to be the dominant metal throughout the occupation of the site from the early Amorite down to the period of the Hebrew exile (prior to 2000 to 600 B.C.). The analysis of several specimens showed that in the Early Bronze Age the composition of bronze consisted of about 78 parts copper to 3 of zinc and 12 of tin. In the next period the parts were roughly 63 to 4 to 33, much more tin being used and less copper. In the late Bronze Age the component parts were  $66\frac{1}{2}$  to  $23\frac{1}{2}$  to 10. Curiously enough, in the period from 1000 to 600 B.C. the component parts were 90 of copper to 2 of zinc and 8 of tin approximately, copper being much more largely used in that period.

Of pure copper apparently few, if any, specimens were found. If we distinguish between an age of pure copper and the period of bronze, and date the use of copper as prior to bronze—*i.e.*, prior to, say, 4000 to 3000 B.C.—this absence of copper at Gezer proves that Gezer was not occupied till bronze was in regular use.

At Jericho, however, Sellin and Watzinger claim to have found at least eleven copper tools, axes and chisels mainly, and one fine chisel was found at Lachish. These were found at Jericho in the stratum belonging to the oldest wall, which represents the earliest Amorite occupation between 4000 and 2500. At Lachish the chisel was found also in the stratum of the very earliest Amorite occupation. It would thus appear that Jericho and Lachish were both occupied by the Amorites at an earlier date than Gezer—in other words, the Amorites found it necessary, as I have elsewhere suggested, to fortify on the east and south at an earlier date than on the west.

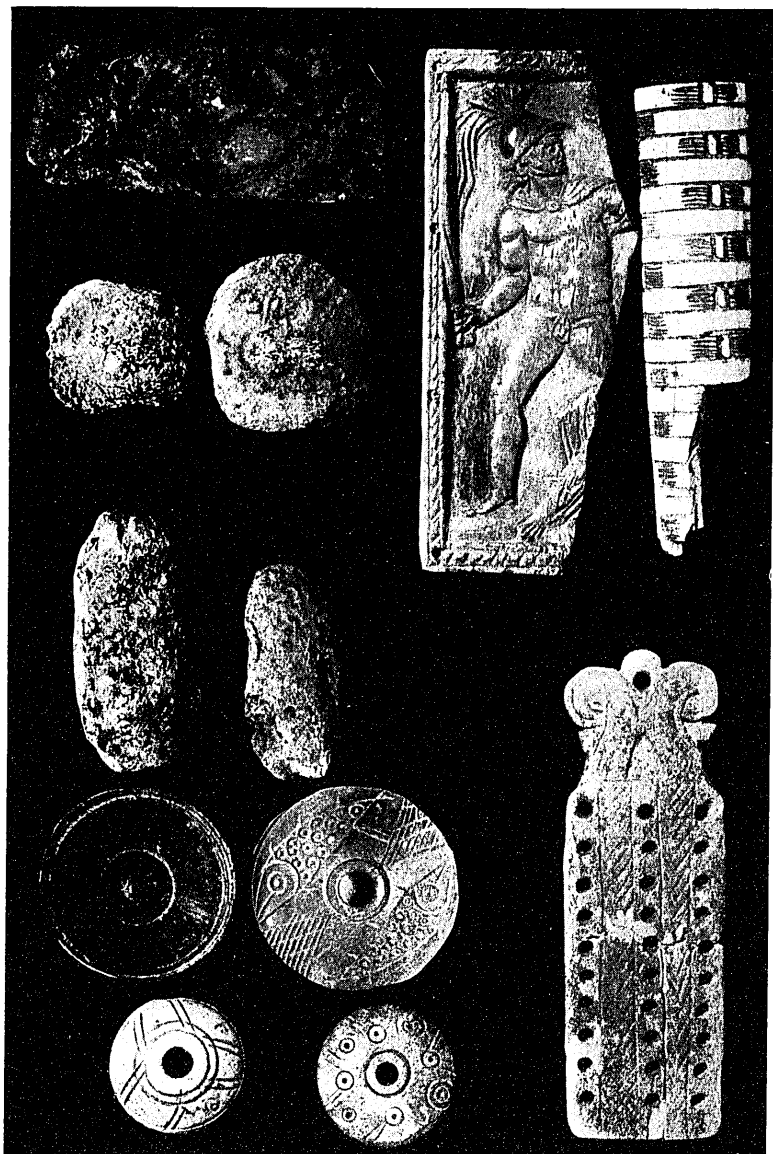
It seems, therefore, that though poorly represented, there was a Copper Age in Palestine, but, so far as our present knowledge goes, for the period from the earliest Amorite occupation down to 1350 B.C. bronze was the dominant metal in use all over the country, except in the south, where, owing to the poverty of the people or the want of facilities, flint continued to be used until about 1000 B.C., when iron came within their reach. It is possible that 1 Samuel xiii. 19-22 offers the explanation of this fact.<sup>1</sup>

<sup>1</sup> In 1 Sam. xiii. 19-22 we learn that no Smith was found in Israel as the Philistines feared they might make weapons for themselves. This passage must refer to the period between 1300-1100 B.C., and speaks of Southern Israel.



BRONZE DISHES, TOOLS AND WEAPONS GERAR AND BETHPELET.  
1300-900 B.C.

facing p. 236.



BRONZE RAZOR  
LEAD FILLINGS  
LEAD BULLETS (SLING)  
STONE WHORLS  
BONE WHORLS

IVORY PLAGUE  
IVORY HANDLE  
SANDSTONE CALENDAR

At Gezer crucibles for melting bronze, and a pottery spout of a bellows, with stone moulds for casting spearheads, spear-handles, arrowheads, etc., were found which clearly indicate their methods in using it. Tools and weapons, ornaments, and jewelry of many varieties were made of bronze. Spears, swords, daggers, spearheads, arrowheads, scimitars, axes, chisels, adzes, gauges, knives, pins, toggle-pins, fibulæ, rings, ear-rings, bracelets, frontlets, anklets, spatulæ, wine dippers like small ladles, spoons, nails, locks, forks with two or three prongs, bowls, vases, mirrors; buckles, pendants, figurines of Astarte and other deities, serpents, bells, pulleys, chains, statuettes of human beings, figures of animals, small unguent spoons—these are some of its uses which amply justify the statement that it was the chief metal in use from earliest times down to the Greek and Roman periods.

It is not my purpose here to give a comprehensive survey of bronze in Palestine, but to deal simply with the latest discoveries. The examples shown on the photographs are all from recent discoveries at Gerar, Bethpelet, and ancient Zion.

The bronze objects shown facing p. 236 consist chiefly of domestic utensils, tools and weapons. The fine carinated and gadrooned bronze bowl from Bethpelet recalls similar bowls in silver (Fig. 31 and Frontispiece). The two small bronze cups are taken from a group found also at Bethpelet. These all date between 1300 and 900.

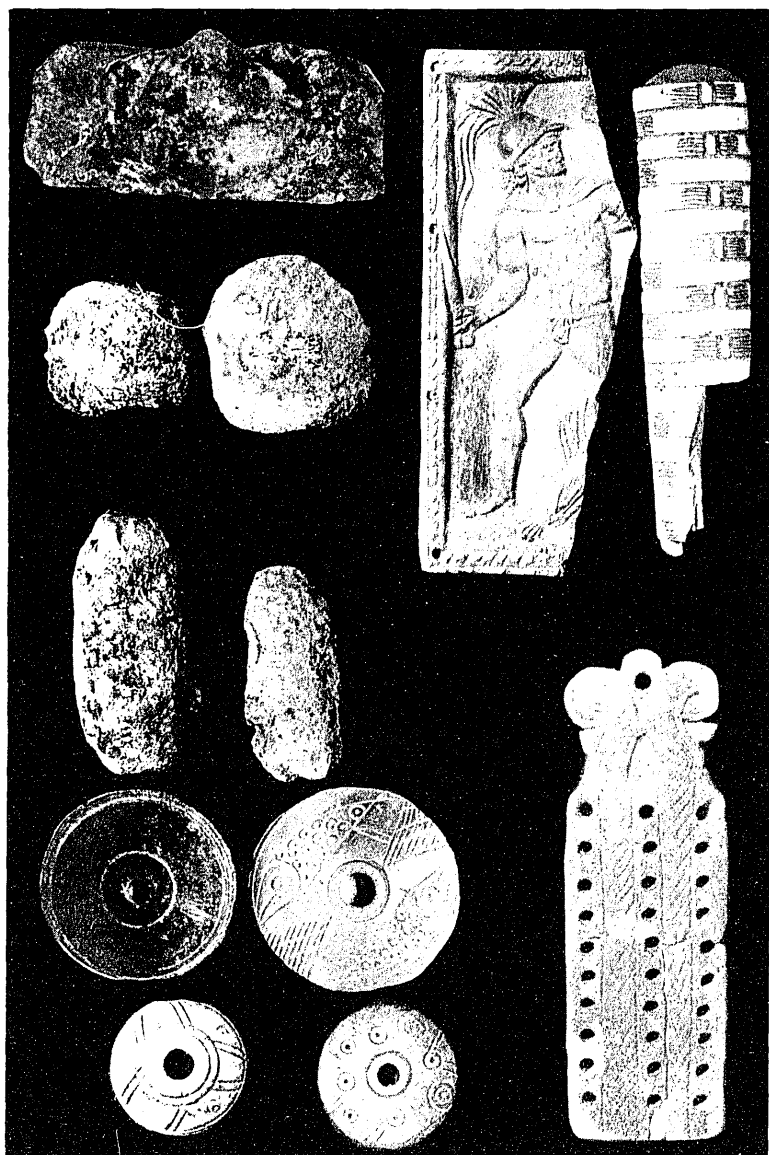
Bronze fibulæ are found all over Palestine, but the finest specimens come from Gerar. In these the pin is not part of the bow, but is inserted in a socket. This socket is a feature of fibulæ in Palestine and North Syria.

They date from 1150-700 B.C. In some the pin is hinged on a rivet.

The rivet hinge begins about 600 B.C. Evidence was found to prove that these were made at Gerar. Straight castings ready for bending into a bow and detached pins with the shank for insertion in the fibula were found.

The catch for the pin was made to imitate the fingers of a hand bent to hold it, and on the earliest example (*Gr.* XVIII, 1) the fingers are marked, as well as on some later examples. Similar fibulæ were found at Bethpelet.

The ring and pin brooch in bronze from Zion is also common, but here the pin is hinged to, or bent round, the ring. In other examples often found in Egypt and of late



BRONZE RAZOR  
LEAD EARRINGS  
LEAD BUTTONS (2) (100)  
STONE WHISTLES  
SANDSTONE ORNAMENT

IVORY PLaque  
IVORY HANDLE  
SANDSTONE ORNAMENT

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date the pin is quite separate, and was used exactly as Celts used it in Scotland. Bracelets, rings, anklets, and other jewelry or trinkets were commonly made of bronze, and these were probably worn by the poorer classes. Of the women's fondness for tinkling jewelry in the early Hebrew period, Isaiah assures us in chapter iii. 16-26.

That furniture was made of bronze is proved by the bronze bedstead from Bethpelet of the eighth century B.C. described under House Furnishing.

Needles with an eye at the top, sometimes also with a similar eye half-way down, toggle-pins with a round eye half-way down, and hairpins with a small rounded ball at the top, are of very common occurrence.

Of bronze chisels, a great variety has been found from Gerar, Gezer, Bethpelet, Lachish, Jericho, and other sites. That shown is a fine example from a group found at Bethpelet dating 1600-1000.

Bronze dippers of similar design to the silver dippers shown, but unadorned, were found at Bethpelet belonging to the period 1100-700.

Of bronze knives, there is also a great variety from several sites. The Plate shows two very common types from Bethpelet of the fourteenth to thirteenth century B.C.

One weapon is perhaps a unique specimen of a bronze dagger with ivory handle and a sheath. The sheath has a chain attachment apparently for affixing to the upper arm. This dates 1100 B.C. The other is an example of a bronze dagger of similar shape, but with no such attachment.

On the Plate is shown also a fine spear-point of bronze with a socket attachment for the shaft. Beside it is a knife of similar design to one of the others.

The stamp is not of bronze. It is a seal impression of a lion devouring a pig, found at Gerar, and dating ninth century B.C.

Among the bronze objects which I found in ancient Zion were six unguent spoons reminiscent of the precious ointment indirectly referred to in Isaiah iii. 24. Besides these were found also bronze pins with round heads, and rings, brooches, bracelets, arrowheads, at the foot of the eastern wall, two bronze crucibles of the Roman period, two bronze scales, a cup, a torc, and a wine dipper. Perhaps the most interesting object in bronze is the small bronze scraper or razor resembling a safety razor of today (Fig. facing p. 237).

## IRON AND LEAD OBJECTS

## FIRST APPEARANCE OF WROUGHT IRON IN PALESTINE

That the date (1200 B.C.) for the first appearance of wrought iron in Palestine was incorrect, Macalister's work at Gezer had already shown me, though it has somehow been overlooked. There, in Tomb No. 31, he found an iron knife among pottery which can scarcely be assigned to a date later than the fourteenth century B.C.; and again in Tomb No. 58 he found a flat band of bronze which had been riveted by an iron rivet, and an iron knife containing three bronze rivets by which the hafting-plates were secured. Both of these instances indicate that iron was in use alongside of bronze in the fourteenth century B.C. Sir Flinders Petrie has also recently confirmed this by the discovery of wrought iron on the site of Gerar. There iron began to be wrought at 1350 B.C., and reached its best at 1200 B.C., which exactly corresponds with Egyptian dates.

The date at which wrought iron appears in Palestine has therefore to be put back 150 years, though it must not be supposed that bronze ceased to be used when iron was discovered.

More recently still the discoveries at Ur in Babylonia have proved that iron was wrought as early as 3500 B.C.; and at Kara-Eyuk, in Asia Minor, the tablets found prove that metal mines—silver, lead, gold, copper—and iron were being worked there at 2300 B.C.

The word for iron on these tablets is Parzi-ili, which has been adopted into Hebrew in the form Barzel. The Perizzites were thus the workers in iron. The word Parzi-ili is Hittite, so that it appears that iron actually came into use in Palestine with the arrival of the Hittites prior to 2000 B.C. The Perizzites were thus not a separate people or clan, but simply Hittite workers in iron.

It would be quite impossible in short space to give a complete account of iron objects found in the various sites excavated in Palestine. It was used from 1300 B.C. for the making of all sorts of implements and weapons, chariot-wheels, knives, swords, axes, chisels, hoes or mattocks, gouges, nails, arrowheads, and buckles. Most of these have been found in ancient Zion; but Gezer, Gerar, and Bethpelet have supplied the greatest abundance of examples.

The subject falls to be dealt with in a corpus of small objects, tools, and weapons.

A good specimen of a gouge from Ophel measured about  $9\frac{1}{2}$  inches. Iron nails were continually turning up, sometimes with pieces of wood attached and occasionally iron hinges, and in one case a lock was found showing that these had belonged to a wooden box. The nails measure from 9 inches to 2 or 3 inches in length. These belong mostly to the Roman period, the last fifty years before Christ. Buckles or ring and pin brooches of iron were common.

**LEAD.**—Lead does not seem to have come into use until Hellenistic times. Then it was used for bringing weights up to the standard. Lead wire was used also for mending broken pottery, and lead weights are also found, though these are not of frequent occurrence. In Roman times the Roman slingers used lead bullets (Plate facing p. 237) as well as rounded pebbles, of which many examples of both were found in the debris outside the eastern wall of Zion. On the upper part of the Plate are two lumps of lead filling picked up as they had fallen out of weights. In later times lead was used in making ossuaries and caskets.

**BONE.**—Bone was extensively used from the earliest times for various purposes. Spindle-whorls, of which three are shown, were frequently of bone. Alongside of these I have placed two whorls of stone, of which also a large number were picked up in Zion, evidences of the practice of weaving and spinning.

One object in bone which makes its appearance in every excavation and practically in every level is the bone pricker or netting-bone, a flat piece sharpened to a point. This is frequently described as a stylus, and supposed to have been used in writing cuneiform. It is very likely that it was used mainly for tracing incised designs on pottery before firing. Hairpins and even needles were frequently, perhaps commonly, of bone where bronze or iron could not be procured.

**IVORY.**—Hairpins of ivory have been found, but had been perhaps only within the reach of the well-to-do. They are of far more frequent occurrence in Egypt than in Palestine, and some beautiful specimens were found at Naqada, among them beautiful ornamental hair-combs, such as women used to wear in our own times, in bone and wood, as well as ivory. So far I have seen no example of such combs from

Palestinian excavations. A fine ivory pin from Bethpelet, from the hole pierced in it, would appear to be a toggle-pin. Probably it was affixed to the hair by a pin through the hole, which would secure it and allow the whole ornamented part to be visible. On Plate facing p. 237 is shown a fine ivory handle of a knife or dagger,  $3\frac{1}{2}$  inches long, belonging to the Roman period. Alongside of it is a small carved ivory panel, measuring 4 inches in length.

This carving represents a king or priest-king with a dagger upraised in his right hand, and holding a girl by his left. The position of the girl's knee and foot shows that she is resisting. The priest-king wears nothing but his plumed helmet and his cloak, which is thrown back over his shoulders, and pinned at the neck by a brooch. It may represent some such scene as the sacrifice of Iphigenia at Aulis by her royal father to still the adverse winds as they set out against Troy.

The carving is fine work. The plaque had been affixed to some background as the holes show.

When this was handed in by our men, we had been annoyed with their introducing fakes and antiques procured from anywhere in order to get baksheesh for them, and at once this was set down as comparatively modern or a fake not really found in the excavation. Dr. Macalister adheres to this opinion. Every expert who saw it in Jerusalem, however, regarded it as of the Greek period. In the circumstances we were robbed of the assistance of stratification in dating it, and so it remains a matter of opinion.

Perhaps the finest piece of ivory work found in Palestine is that recovered from a tomb at Bethpelet last winter. "It is a band of ivory engraved with scenes. A noble is seated on a folding chair, holding a bowl and a lotus flower. Behind is a waiting man with folded hands, and a palm tree at the back of all. Before the noble is a girl offering a jar of drink and a lotus. Next comes a dancing girl performing to the piping of another girl behind her. After a fragment of another figure, and a break, there are two men each bearing a pole across the shoulders with a group of ducks dangling from either end. Another man follows with a calf over his shoulders. Then comes a long scene of a clap-net for catching birds: the water and fish in the foreground are only part of the marsh scenery, like the papyrus stems behind. Beyond this are two bulls facing opposite ways, and a palm

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Among the bronze objects which I found in ancient Zion were six unguent spoons reminiscent of the precious ointment indirectly referred to in Isaiah iii. 24. Besides these were found also bronze pins with round heads, and rings, brooches, bracelets, arrowheads, at the foot of the eastern wall, two bronze crucibles of the Roman period, two bronze scales, a cup, a torc, and a wine dipper. Perhaps the most interesting object in bronze is the small bronze scraper or razor resembling a safety razor of today (Fig. facing p. 237).

## IRON AND LEAD OBJECTS

## FIRST APPEARANCE OF WROUGHT IRON IN PALESTINE

That the date (1200 B.C.) for the first appearance of wrought iron in Palestine was incorrect, Macalister's work at Gezer had already shown me, though it has somehow been overlooked. There, in Tomb No. 31, he found an iron knife among pottery which can scarcely be assigned to a date later than the fourteenth century B.C.; and again in Tomb No. 58 he found a flat band of bronze which had been riveted by an iron rivet, and an iron knife containing three bronze rivets by which the hafting-plates were secured. Both of these instances indicate that iron was in use alongside of bronze in the fourteenth century B.C. Sir Flinders Petrie has also recently confirmed this by the discovery of wrought iron on the site of Gerar. There iron began to be wrought at 1350 B.C., and reached its best at 1200 B.C., which exactly corresponds with Egyptian dates.

The date at which wrought iron appears in Palestine has therefore to be put back 150 years, though it must not be supposed that bronze ceased to be used when iron was discovered.

More recently still the discoveries at Ur in Babylonia have proved that iron was wrought as early as 3500 B.C.; and at Kara-Eyuk, in Asia Minor, the tablets found prove that metal mines—silver, lead, gold, copper—and iron were being worked there at 2300 B.C.

The word for iron on these tablets is Parzi-ili, which has been adopted into Hebrew in the form Barzel. The Perizzites were thus the workers in iron. The word Parzi-ili is Hittite, so that it appears that iron actually came into use in Palestine with the arrival of the Hittites prior to 2000 B.C. The Perizzites were thus not a separate people or clan, but simply Hittite workers in iron.

It would be quite impossible in short space to give a complete account of iron objects found in the various sites excavated in Palestine. It was used from 1300 B.C. for the making of all sorts of implements and weapons, chariot-wheels, knives, swords, axes, chisels, hoes or mattocks, gouges, nails, arrowheads, and buckles. Most of these have been found in ancient Zion; but Gezer, Gerar, and Bethpelet have supplied the greatest abundance of examples.

The subject falls to be dealt with in a corpus of small objects, tools, and weapons.

A good specimen of a gouge from Ophel measured about  $9\frac{1}{2}$  inches. Iron nails were continually turning up, sometimes with pieces of wood attached and occasionally iron hinges, and in one case a lock was found showing that these had belonged to a wooden box. The nails measure from 9 inches to 2 or 3 inches in length. These belong mostly to the Roman period, the last fifty years before Christ. Buckles or ring and pin brooches of iron were common.

LEAD.—Lead does not seem to have come into use until Hellenistic times. Then it was used for bringing weights up to the standard. Lead wire was used also for mending broken pottery, and lead weights are also found, though these are not of frequent occurrence. In Roman times the Roman slingers used lead bullets (Plate facing p. 237) as well as rounded pebbles, of which many examples of both were found in the debris outside the eastern wall of Zion. On the upper part of the Plate are two lumps of lead filling picked up as they had fallen out of weights. In later times lead was used in making ossuaries and caskets.

BONE.—Bone was extensively used from the earliest times for various purposes. Spindle-whorls, of which three are shown, were frequently of bone. Alongside of these I have placed two whorls of stone, of which also a large number were picked up in Zion, evidences of the practice of weaving and spinning.

One object in bone which makes its appearance in every excavation and practically in every level is the bone pricker or netting-bone, a flat piece sharpened to a point. This is frequently described as a stylus, and supposed to have been used in writing cuneiform. It is very likely that it was used mainly for tracing incised designs on pottery before firing. Hairpins and even needles were frequently, perhaps commonly, of bone where bronze or iron could not be procured.

IVORY.—Hairpins of ivory have been found, but had been perhaps only within the reach of the well-to-do. They are of far more frequent occurrence in Egypt than in Palestine, and some beautiful specimens were found at Naqada, among them beautiful ornamental hair-combs, such as women used to wear in our own times, in bone and wood, as well as ivory. So far I have seen no example of such combs from

Palestinian excavations. A fine ivory pin from Bethpelet, from the hole pierced in it, would appear to be a toggle-pin. Probably it was affixed to the hair by a pin through the hole, which would secure it and allow the whole ornamented part to be visible. On Plate facing p. 237 is shown a fine ivory handle of a knife or dagger,  $3\frac{1}{2}$  inches long, belonging to the Roman period. Alongside of it is a small carved ivory panel, measuring 4 inches in length.

This carving represents a king or priest-king with a dagger upraised in his right hand, and holding a girl by his left. The position of the girl's knee and foot shows that she is resisting. The priest-king wears nothing but his plumed helmet and his cloak, which is thrown back over his shoulders, and pinned at the neck by a brooch. It may represent some such scene as the sacrifice of Iphigenia at Aulis by her royal father to still the adverse winds as they set out against Troy.

The carving is fine work. The plaque had been affixed to some background as the holes show.

When this was handed in by our men, we had been annoyed with their introducing fakes and antiques procured from anywhere in order to get baksheesh for them, and at once this was set down as comparatively modern or a fake not really found in the excavation. Dr. Macalister adheres to this opinion. Every expert who saw it in Jerusalem, however, regarded it as of the Greek period. In the circumstances we were robbed of the assistance of stratification in dating it, and so it remains a matter of opinion.

Perhaps the finest piece of ivory work found in Palestine is that recovered from a tomb at Bethpelet last winter. "It is a band of ivory engraved with scenes. A noble is seated on a folding chair, holding a bowl and a lotus flower. Behind is a waiting man with folded hands, and a palm tree at the back of all. Before the noble is a girl offering a jar of drink and a lotus. Next comes a dancing girl performing to the piping of another girl behind her. After a fragment of another figure, and a break, there are two men each bearing a pole across the shoulders with a group of ducks dangling from either end. Another man follows with a calf over his shoulders. Then comes a long scene of a clap-net for catching birds: the water and fish in the foreground are only part of the marsh scenery, like the papyrus stems behind. Beyond this are two bulls facing opposite ways, and a palm



tree is at this end as at the other. The fragments of this beautiful work were found crushed with the burnt boards of a long box, which contained lumps of colour, red, yellow, and green. It had been burnt in the destruction of the residency of the XVIII to XIX Dynasty. The whole mass was solidified with paraffin wax to preserve it, and has been gradually dissected here and restored. In the same chamber lay a large jar of sulphur, doubtless obtained from the mine which is still worked in the district.

“Regarding the age and source of this work, the style of the dress is of the early part of the XIX dynasty. The fowling scene is purely Egyptian; the folding chair is also represented at that period. The heads of the bulls are Cretan in style. The treatment of the heads and faces is not quite Egyptian, nor are the high conical heads of the first servitor or of the man dragging the clap-net. We may probably see here the product of a highly trained Syrian artist copying an Egyptian scene for the Egyptian resident. It is thus the firstfruits of the search for the missing art of the Syrian civilisation, though the subjects here are mostly due to Egyptian influences” (Petrie).

#### A CALENDAR OF 800 B.C.

A very interesting object is shown on Plate facing p. 237. It is a sandstone plaque pierced with thirty holes for insertion of pins, evidently having served as a calendar. It comes from Bethpelet, and dates about 800 B.C. “Its main interest is that it proves that the week was one of seven days regardless of the lunation.”

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